ILDER Penfield and Harvey Cushing created legacies to neurosurgery, both in terms of the physicians they trained and in their philosophical approach to the field. Although they maintained contact for many years, their biographies provide only brief comments on their relationship, without any thorough examination of their personal correspondence.3–7 Both men may have had some sense of their destiny and of the importance of their work to posterity, because each carefully saved records, notes, and letters, and each wrote autobiographical accounts. Although Penfield was never formally a resident on Cushing’s service, he held an abiding respect for Cushing and regarded him as his main mentor in neurosurgery. For his part, Cushing regarded Penfield as an equal, although the younger man was technically of the second generation of neurosurgeons. In our study we examine the Penfield–Cushing connection through an analysis of their unpublished personal letters, a correspondence that reveals an intriguing relationship that profoundly affected the growth of the discipline of neurosurgery.

Penfield and Cushing Archives

In this manuscript we have collated all known Penfield–Cushing letters from two main collections: the Wilder Penfield Archive in the Osler Library of McGill University and the Harvey Cushing Papers at the Yale University Library. Between 1919 and 1939, Penfield and Cushing exchanged at least 113 letters and three telegrams. Included in the archives are two replies Penfield wrote to Louise Eisenhardt in response to inquiries by Cushing; eight letters are secretarial. As can be expected, a number of letters are missing; they are referred to by comments in other letters. Thus, according to our calculations the total is closer to 130 (Fig. 1).

The careful saving of personal and professional papers by Penfield and Cushing may appear compulsive to us. Compared with the present age, however, when the contents of communications may only have a transient existence (as in emails) or when correspondence is secretarial in origin, these letters provide us with a valuable means to examine the development of the specialty of neurosurgery, the dynamics of professionalism, individual professional growth, and an important professional relationship.

Spanning at least 20 years, the extant letters begin in 1919 and end on September 18, 1939, less than 20 days before Cushing died. Topics and progression of the correspondence are viewed in the context of Penfield’s developing career; the letters offer a window on Penfield’s personal and professional development and on Cushing’s role as his mentor and model.
England–Boston

Beginnings of a Professional Relationship

Although it is not clear from his autobiography, but as we have stated in a previous publication, Penfield must have been seriously influenced to become a neurosurgeon while an intern on Cushing’s service at the Peter Bent Brigham Hospital in 1919 to 1920. Less clear but based on the same sources was Cushing’s impression and appraisal of Penfield as an intern. Penfield must have made, however, an excellent impression as a scholar and hard-working intern to meet Cushing’s exacting demands, as the following letter indicates:

July 30, 1919

My dear Coy [George McCoy, Registrar of the Medical Department of the Johns Hopkins Medical School]:

We have, by mere chance, a vacancy on the Surgical Staff [of the Peter Bent Brigham Hospital] for the next 16 months . . . .

I have had three applications for a position from Hopkins men and I am writing to ask you to let me know on the quiet how you would rate them . . . .

You know about what I want, and as I have always relied on your judgment here I am again, asking for an opinion . . . . We have, too [in addition to Gilbert Horrax], a very nice gentlemanly fellow named W. G. Penfield, a Rhodes Scholar, and if you can let me have someone who comes up to his standard I will be overjoyed. How about these two men that I have mentioned? . . .

Most truly yours,

Harvey Cushing

After his stint as an intern at the Peter Bent Brigham Hospital, Penfield returned to Oxford for research in Sherrington’s laboratory. This was followed by a period of study from January to June 1920 at the National Hospital for Nervous Diseases at Queen Square in London. Here he was exposed to brain operations as an assistant to Sir Percy Sargent, the student and successor to Sir Victor Horsley. Three letters from 1919 indicate that Penfield had begun to form a positive relationship with Cushing at the Brigham and evidently wished to maintain contact with him. Cushing was interested enough to offer him a place for neurosurgical training. It appears, however, that Penfield needed more time to think about his future and may not have been completely decided on entering the field of neurosurgery. Evident also at this stage was the beginning of the influence of the mutual connections of Sir William Osler and Sir Charles Sherrington in the lives of Cushing and Penfield.

Dec. 1, 1919

Dear Dr. Cushing,

I have certainly not regretted coming over here. Professor Sherrington has taken a good deal of interest and I am growing more enthusiastic everyday . . . . The National Hospital is giving post graduate courses of 10 weeks duration consisting of daily ward work, out-patient and lectures [sic]. The men are Collier, Howell, Stewart, Gordon Holmes, Sargent, Buzzard, Tooth, Russell, Greenfield etc. [sic] Thank you very much for the letters to three of those men . . . .

Sir William’s [Osler] illness has proved to be influenza . . . He is still in bed and pretty weak.*

Please give my regards to Cutler and the house officers.

Sincerely yours

Wilder G. Penfield. [sic]

I hope you will have a good Christmas. - W.G.P.

December 23, 1920

My dear Penfield:

I am so glad to have your Christmas card, and above all to know of your good fortune in getting a Beit [Memorial] fellowship. I wonder what your plans are, subsequent to this. Are you

* Osler’s illness, noted by Penfield, developed into a lung abscess from which he died on December 29th. Cushing, at the invitation of Lady Osler, immediately began the intensive 5-year project that led to his monumental Pulitzer Prize–winning biography of Osler.
still thinking of doing any surgical work, and are you planning to come back here [Peter Bent Brigham Hospital] for a time? I shall want to keep a place open for you, if you ever do. . . .

Always most sincerely,
Harvey Cushing

[month and day unreadable] 1921

My dear Penfield:

I am delighted to receive your note [missing letter]. You have been away for a perfect age. You were going to come back here for a sojourn with me and to help me with neurological surgery for a year. Just what are your plans? You speak of going to Detroit. Is this fully settled upon? . . .

Do come on here for the [unreadable] meeting, if you can. I wish that I could put you up, but the house will be full of guests who have been already invited. The boys will be delighted to have you here at the hospital, however, where they can probably find a bed for you, or on a pinch you can sleep down here in my rooms. . . .

With regards to your wife, I am,
Very sincerely yours,
Harvey Cushing

New York–Boston

Penfield’s Neurosurgical Experience With Cushing

In the end, Penfield took a position with Allen O. Whip-
ple at the Presbyterian Hospital in New York City, where he remained until February 1928. This portion of the correspondence comprises 27 letters or more than 20% of the whole. Topics during this period include Penfield’s neurosurgical training, patients on whom Penfield performed surgery at the Presbyterian Hospital and who were known to Cushing, their mutual associations with Sir Charles Sherrington and Sir William Osler, Penfield’s wish that William Cone would also learn some neurosurgery from Cushing, and Penfield’s new post as neurosurgeon at the Royal Victoria Hospital and McGill University, Montreal.

Although congratulatory to Penfield on his appointment to the Whipple staff at the Presbyterian Hospital, Cushing still wanted Penfield to work for a time at the Brigham. He wrote on July 5, 1921, “I wish that I might have you here for six months before you take up the neurological work, however.” Cushing, persistent and perhaps sensing Penfield’s potential, seemed determined to get him to come to Boston, as expressed again on December 4, 1927:

We are going to have a P.B.B.H. [Peter Bent Brigham Hospital] birthday party here the 24th to 26th of May and I hope you are coming.

We wish to have the former members of the house staff contribute to the program and I wonder if you could not take a few minutes and give us the gist of your endothelioma studies. Or perhaps you may have something else that is new and more interesting and can send me a title.

Do put the date down, and don’t fail us.†

Always sincerely yours,

Harvey Cushing

Cushing and Penfield had several discussions about clinical training. In fact, Cushing relied on Penfield for advice regarding the work being done at European centers.

November 28, 1924

Dear Penfield:

Do let me know what kind of time you had in Madrid. . . . You ought to feel gratified at being the first American student, so far as I know, to work with [Ramon y] Cajal and his group.

Tracy Putnam . . . is planning to go abroad on a scholarship. . . . You have knocked around the European clinics so thoroughly during the past few years that perhaps you could give some hints. . . . Where would you personally like to go for six months of clinical work?

Always sincerely yours,

Harvey Cushing

† Such admonitions from Cushing were a mild form of his imper-ative and often brusque tone that had a bruising effect on many residents who trained under him. Mention of Penfield’s “endothelioma studies” may have been a sore point with Penfield. Many years later he recalled how he had submitted a prize essay on the bony overgrowth of the skull in relation to meningiomas, which he examined in a series of patients who had undergone operation by Horsley and Sargent. Hearing no response for many months he found on inquiry that the manuscript had lain neglected on Cushing’s desk waiting for his appraisal. By strange coincidence, within 1 year, Cushing himself published a paper on the same topic.
December 4, 1924

Dear Dr. Cushing:

... The trip to Spain was very much worthwhile, and I got exactly what I hoped to get from Rio-Hortega and the rest.

Putnam wrote me not long ago that he had in mind a trip abroad. ... George Riddoch is a very energetic neurologist at London General Hospital ... but I think in France it is possible to get a number of viewpoints from Sicard ... [and] the work seems to be well done. Sicard's work it seemed to me was planned so as to make a good deal of clinical teaching possible. ... From a clinical point of view, there is nothing to go to Spain for. ... 

Yours very sincerely,

Wilder G. Penfield

In the same letter Penfield asked Cushing for a photograph (Fig. 4) and thanked Cushing in his next letter dated December 15, 1924:

Your photograph was very welcome, and I cannot thank you enough. It has meant a great deal to me to know men like yourself who have made contributions to neurology that will never be forgotten, and I expect to hand on this picture to Wilder, Jr. when he has become a doctor.‡

During this period the correspondence reveals that Penfield and Cushing found common ground outside of medicine. Cushing held a keen interest for baseball. Penfield had played football and then coached the Princeton varsity team. A letter dated July 16, 1925 from Penfield shows that he and Cushing also enjoyed attending sporting events together: “I enjoyed very much going to the track-meet with you and [Percival] Bailey.”

As Penfield became more independent with regard to neurosurgery under Whipple, he acquired his own patients, some of whom were known to Cushing.

February 4, 1926

Dear Dr. Cushing:

... Mr. William Leveritt tells me that he was a classmate of yours at Yale. You probably know that after he returned to this country, he tried to knock a railroad locomotive off the tracks with a Ford car [and sustained injury leading to] paralysis of the muscular spiral nerve and paralysis of one hypoglossal nerve. I removed the muscular spiral from the dense scar tissue and the result of the operation has been most gratifying and rapid.

With best regards to all my friends at Brigham,

Sincerely yours,

Wilder G. Penfield

February 6, 1926

Dear Penfield:

... I am so much obliged to you for having taken care of Leverett, [sic] He has written so enthusiastically of you and of his treatment at your hands.

Always sincerely yours,

Harvey Cushing

‡ Penfield’s eldest son in fact became involved in business and education. His younger son, Jefferson (named after a maternal grandfather, not the Manchester neurosurgeon) became an obstetrician.
Penfield–Cushing letters

Mutual Associations With Osler and Sherrington

The connections between Penfield and Cushing to Sir Charles Sherrington and Sir William Osler were mutually beneficial. The early exchanges between them were significant. Cushing recognized the importance of these associations, as did Penfield. Penfield's continued close proximity to Boston as New York and a comfortable night trip, so I shall hope that we may see much of you.

Always sincerely yours,
Harvey Cushing

Montreal–Boston

A Job Title

Beginning in September 1928, after Penfield had moved to Montreal, there are 89 items of extant correspondence between him and Cushing. Letters from this period comprise approximately 75% of the correspondence. Topics ranged from patients to pathology. However, the most enlightening exchanges are those of a philosophical nature, in which both men express thoughts on what it means to be a neurosurgeon and on their philosophy of medicine.

Appropriate for stepping into a new position at a prestigious institution and given that the young specialty of brain surgery did not know yet what to call its practitioners, Penfield asked Cushing what he should call himself. His letter is lost, but Cushing's enlightening and entertaining response was as follows:

November 23, 1928

Dear Penfield:

. . . Gracious, what shall I say to your question? “Neurosurgeon” I think is a little less of a mouthful than “neurological surgeon.” [sic] I am not at all sure we might not as well call ourselves “neurologists”, taking for granted that an ophthalmologist is at the same time an ophthalmological surgeon—at least in this country. Anyhow, anything is better than “Nervous Surgeons” which I have seen used!

Much power to your elbow!

Always yours,
Harvey Cushing

Penfield responded as follows on November 29, 1928:

I am not sure but that the title “Nervous Surgeon” very often describes my feelings, both pre-operatively and post-operatively. . . . I am amazed at the amount of material there seems to come over with the Osler library, which I personally hope won’t be until Lady Osler has finally passed in her checks [died], you with Campbell Howard and a few others will form an Osler nucleus which will do much to bring back the old spirit to McGill.§ Montreal, I am glad to say, is almost as near to Boston as New York and a comfortable night trip, so I shall hope that we may see much of you.

Always sincerely yours,

Montreal–Boston

§ Willie Francis was the son of Sir William Osler’s cousin Marion. He was the chief of three editors of the Bibliotheca Osleriana and stayed on as Osler Librarian at McGill for 30 years. Osler bequeathed his treasure of almost 8000 books on medical history, many rare and valuable, to McGill. Penfield became a friend of Dr. William Francis, relying on his erudition in medical history for decoration of the entrance lobby of the Montreal Neurological Institute. In regard to Cushing’s comment about Lady Osler, a strange circumstance occurred. She herself was naturally concerned about the eventualities of living in an empty house stripped of its familiar books. Special boxes in which to ship the books to Canada arrived on August 30, 1928. Lady Osler died quietly the next day, in the presence of her sister, Susan Chapin, and John Fulton.
to be here at Montreal at both Hospitals [Royal Victoria and Montreal General Hospitals]. Dr. [William] Cone and I are trying to carry on the Clinic at the General and at the Victoria.

Penfield decided on “neurosurgeon” for himself and “Department of Neurology and Neurosurgery” for his division at McGill.

Surgeon’s Surgeon

One of their most poignant discourses during this period concerns the treatment of Ruth Inglis, Penfield’s sister, in whom an oligodendroglioma of the frontal lobe had been diagnosed. Penfield relates the story in his autobiography, but the letters between him and Cushing prove additionally revealing. Within a few months of moving to Montreal, Penfield was met with the wrenching decision of what to do for his own sister who had suffered seizures for years. Recently she had shown signs of increased intracranial pressure, including mental status changes and papilledema. Radiographic studies revealed a calcified leptomeningeal lesion. Within a few months of moving to Montreal, Penfield was met with the wrenching decision of what to do for his own sister who had suffered seizures for years.

Penfield’s sister subsequently underwent x-ray treatments. Her symptoms returned later in 1930, however, and Penfield referred her to Cushing at the Peter Bent Brigham Hospital. On November 6, 1930, Cushing took on the arduous reoperation. Although Penfield stayed with his sister in Boston for the surgery, he returned to Montreal shortly thereafter. A letter from Penfield inquiring about his sister’s condition has been lost, although Cushing replied on November 18, 1930 that she had made an excellent recovery (Fig. 5). Penfield, thankful for the expert treatment of his sister by Cushing, sent him a gift. Unfortunately, the letter that may have accompanied the gift from Penfield has been lost. However, Cushing responded:

November 24, 1930

Dear Wilder:

Thanks greatly for your gift to the clinic of that excellent Barton rongeur. It will be much used and is a far better one. I am sure, than the clumsy giant forceps that we have heretofore used and which were devised by my friend, John Munro. The Bartons are a rare tribe.

You will of course keep me posted about your sister, and if
I get any further leads about the oligo lesions and their prognosis I will let you know.

Always yours,

H.C.

Eight months later, Penfield's sister died as a result of the progressing tumor. On July 16, 1931, Penfield wrote to Cushing telling him of his sister's condition during her last few months and added, "I want to thank you very much for all you did for her. Simply to postpone death is very much worth while, for life when we measure it by weeks and months becomes a very precious thing. She was very much pleased by your letter to her, as she wrote me shortly after receiving it."

After the dialog about Penfield's sister, their letters begin a dramatic change in form. From this point on Cushing's letters begin "Dear Wilder," although Penfield continues to show a formal respect for his mentor, still addressing his letters "Dear Dr. Cushing." The shared experience of the treatment of Penfield's sister appears to have brought the two men into an association beyond merely a professional one. Cushing has by this time accepted Penfield not only as a disciple, but also as one who is launching on his own unique career path (Fig. 6). Penfield's letters evoke a mutual sense of comfort and friendliness. In his new position at McGill, Penfield begins to come into his own and feel on a par with others of stature in neurology and neurosurgery, and Cushing notes this.

Penfield Relies on Cushing's Advice

As Penfield progressed in his career in Montreal, there were several exchanges about the surgery of tumors in eloquent cortex. Penfield appears to have continued to rely on Cushing's experience for expert advice in difficult surgical situations. The following is exemplary:

March 23rd 1931

Dear Dr. Cushing:

. . . May I ask your advice about another case which has been worrying me a good deal? This is the case of a woman of middle age, unfortunately the wife of a friend of mine, who for a period of two years has had Jacksonian seizures affecting her right face, together with a few minor convulsions. In the last few months there developed a weakness of the right face and an aphasia which is rather of the motor type. I . . . found that quite far anterior in front of the fissure of Sylvius on the left side, there was a very hard circumscribed tumor which just came to the surface. I removed a piece of it for examination and never have encountered more tenacious or dense tissue. It proved to be a fibrous astrocytoma, the fibers of the astrocyte type packed very closely together and with long slender fibrils. It was quite vascular.

Because of its situation and her aphasia I did nothing more except to leave a decompression over the area and replace the rest of the bone flap. Her condition after operation was about the same as before. If anything, there is slight improvement in speech.

I have been worrying about going back in on the case and finally thought to ask your advice. I recognize that it is quite impossible for you to tell me whether or not I can take it out. Let me put the question this way. Is it possible to take out a tumor about the size of a golf ball from this region without leaving a permanent aphasia? I do not find any sign of nerve cells within the tumor suggesting that the tumor has infiltrated about cerebral tissue. I should be tempted to go back in unless your experience is that it is better to leave tumors in this situation alone. I must admit that I have always been afraid of the speech center, however radical I may be sometimes in other regions.

I should appreciate very much your advice.

** Penfield’s sister became the subject of a detailed case report coauthored by Donald Hebb, the psychologist. It illustrated for the first time that the removal of a large frontal lobe lesion can be followed by surprisingly little behavioral deficit and even improvement compared with the preoperative state. According to Hebb, this case formed the basis for one of Penfield’s most important contributions to the understanding of brain function.

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Beyond their mutual interest in tumors, both men were interested in examining cortical function in vivo. Penfield may have capitalized on ideas that Cushing had generated and was interested in examining cortical function in vivo. Penfield wrote the following as he was preparing to move from the Peter Bent Brigham Hospital:

I am just dismantling my office here and was just about to throw away these old notes which I thought they might perhaps interest you. At all events, you can see that I, too, had a very difficult group of cases. . . .

The letter of inquiry that Penfield wrote to Cushing after receiving the sketches with the sketches has been lost. Cushing answered on September 24, 1932:

I have almost forgotten what it was I sent you in the way of my old notes which turned up in the course of dismantling my office, but I can answer your question by saying that all I know of cortical stimulation was learned from Sherrington in 1900; and so far as I know, I am the only person who ever spent a long week-end stimulating the cortex of a gorilla. We used monopolar electrode and faradic current. You may of course imagine why I was so momentarily stirred until just now in looking for another paper I happened to run across an old article of mine in Brain [1909] on the faradic stimulation of the postcentral gyrus. It isn’t much of a paper, but I thought it might interest you.

Penfield answered (April 7, 1937):

I did enjoy seeing you on my flying visit to New Haven. Thank you very much for giving me so much of your time, to say nothing of your hospitality. . . . You were the first, as far as I can find, to record sensation from stimulation of the human cortex. You were also the first in that article with Thomas to record the sensation of sound on stimulation of the temporal lobe. I meant to talk to you about that on the trip but there seemed to be so many things to talk about that I did not want to bother you with my undertaking.

The cordiality of the Penfield–Cushing relationship after Penfield moved to Montreal becomes obvious in their letters. On December 21, 1932, Cushing wrote:

I have just been reading with a great thrill your paper with Chorobski’s (to whom my compliments) in the last number of the Archives. It’s simply a magnificent piece of work, and in combination with Stanley Cobb’s paper sets a standard for a combined neuro-physiological study that will be hard to beat. I wish that I might have been in Atlantic City last June to hear it and to add to the applause you must deservedly have received. . . .

Penfield, on January 26, 1933 replied:

I have never received a letter that filled me with more pleasure than yours of December 21st. Thank you very much for the Christmas present. It is seldom that I receive a word of
Penfield–Cushing letters

praise for publications. For the most part we are all busy doing our own work and take little time for applause. . . . Thank you very much again for your letter. Your work is giving a real meaning to the autonomic nervous system. My small contribution is only one little detail in the structure.

_Cushing Invites Penfield’s Counsel on a Brain Tumor Registry_

One of Cushing’s last efforts in Boston was to make the collection of his brain tumor specimens systematically available for study. He sought out Penfield as a director for the new program.

June 26, 1933

Dear Wilder:

I shall be leaving here [Boston] next autumn and I am anxious before doing so to perfect an organization whereby my collection of some two thousand brain tumors can be permanently useful. It has seemed to me that the best way to do so would be to make them the basis of a registry and have them transferred to the Warren Museum under Dr. [Louise] Eisenhardt’s direction.

I do not wish this to be a purely local project but one that can be open to anyone who desires to call upon the registry for diagnosis of their own tumors or who wish to use it like a library, to get information for their own purposes of instruction or publication. It therefore would not be a “registry” in the commonly accepted meaning of the term, which would intimate that people were expected to register their tumors in it.

I would like to see a Board of Directors appointed representing various institutions and schools and hope very much that you may be willing to lend your name to such a Board which might in an advisory capacity be called together occasionally at some one of the annual neurological or neurosurgical meetings.

Sincerely yours,

Harvey Cushing

30th June 1933

Dear Dr. Cushing:

Of course I shall be delighted to be a Director of the Brain Tumor Registry of the Harvard Medical School. The scheme is a very good one. It seems to me that the collection could be augmented from time to time, if you wish to have it so, by donations of large collections. It seems to me that desultory additions of tumors to any registry are, in general, a waste of time. There is real value only in the large groups of cases worked up by a few individuals.

If I can be of any service in connection with the Tumor Registry I shall be delighted.

Yours sincerely,

Wilder Penfield

_Montreal–New Haven_

In the autumn of 1933, Cushing moved to New Haven and assumed the post of Professor of Neurology at Yale. This period also witnesses Penfield’s career reaching maturity with the laying of the cornerstone for the Montreal Neurological Institute in October 1933. Although Cushing’s health had begun to deteriorate during this time, a gastric ulcer and knee problems being his chief maladies, the number of letters between Penfield and Cushing actually increases. More than half of the total correspondence originated while Cushing was in New Haven during these last 6 years of his life. The tone of the letters becomes more introspective and philosophical on the part of Cushing, sometimes with flashes of humor.

_Cushing Seeks Penfield’s Blessing on the Montreal Neurological Institute_

One of the first exchanges during this period is about the opening of the Montreal Neurological Institute on September 27, 1934. Six months before, Penfield was anxiously choosing invitees whom he thought would be appropriate for the opening ceremonies of the only combined hospital and research institution dedicated to neurology and neurosurgery outside of Europe. Penfield wished to mark the occasion with the recognized giants in neurophysiology, neurology, and neurosurgery in attendance. Among those whose presence he deemed critical was Cushing.

26th March 1934

Dear Dr. Cushing:

We are planning to have the opening exercises of the Montreal Neurological Institute early in October next and we are all of us very anxious to have you give an address on that occasion. We cannot start this work in neurology and neurosurgery without your blessing.

. . . You could, of course, choose any subject on which to speak, but we would be very much pleased if you would look into the future or the past of neurology a little.

We are planning to publish a small volume to commemorate the opening of the Institute and would hope to include your address . . . and one or two others as well as short sketches of the lives of the thirteen men whom we consider have contributed most to the development of neurology and neurosurgery. The name of these men will appear in a frieze in the entrance hall of the Institute.

The name of Harvey Cushing is one of those to appear there, as is that of Sherrington. I hope this will not deter you from appearing. . . . Cajal and Pavlov are also on the list. I shall have to warn you therefore, that a short sketch of your life will be included in the volume.

If you could give us an address for about twenty minutes it would ensure the success of the occasion. . . .

Yours very sincerely,

Wilder Penfield

April 3, 1934

Dear Wilder:

I am much beholden to you for your letter . . . and the pleasant things you say therein about me. Nothing would give me greater pleasure than to take part in the dedicatory exercises next October of your Institute. . . .

The last time I was in Montreal was for the dedication of the new Physiological Laboratory at which time Sherrington was there also. It is too bad that he does not see his way clear
to come again. Sherrington had written to Penfield that he was 

nearly bedridden with rheumatism. I went up to Oxford last 

October to see him when I was in England but just missed him 

as he was off somewhere getting a massage. . . .

I am most anxious to see your new Institute from which we 

all expect great things; and if I continue to improve physically 

as I just now appear to be, you may count on me to be on hand. 

Now that I have withdrawn from active work, I shall hope to 

have greater opportunity than heretofore to visit my friends and 

see at first hand what they are doing. 

Always with best wishes, I am 

Sincerely yours,

Harvey Cushing

Letters between the two in June through September 

1934 include Penfield’s instructions on an outline for 

Cushing’s talk at the opening ceremonies, an overview of the 

activities of the Institute including its structure, and a 

preview of the “Foundation Volume,” a book that would 

commemorate the festivities. In a letter to Cushing dated 

June 11, 1934, Penfield cites the 13 members whose 

names will be listed in the “Hall of Neurological Fame” and 

whose biographies will be included in the book. “The 

list of these sketches is as follows: Jackson, Horsley, Sher-

rington, Charcot, Claude Bernard, von Monakow, Erb, 

Nissl and Alzheimer taken together, Pavlov, Cajal, Golgi, 

Weir Mitchell and yourself.”

On September 14, 1934, 13 days before the Founda-

tion exercises, Cushing wrote to Penfield about the topic 

of his upcoming speech, “You mustn’t expect too much of 

it . . . .” In Penfield’s mind no other person meant so much 

to the opening of the new Institute as Cushing; he rep-

resented the fusion of science, neurology, and surgery. 

Aware that he was on such a high pedestal, Cushing did 

not want to disappoint Penfield. In the same letter Cushing 

continued, “I don’t see how you could possibly have put 

together a more promising organization than you have 

outlined for me. It must be a great comfort to you to have 

so nice a fellow as Colin Russell [sic] at your right hand. 

I met [William] Come down here at a recent meeting and 

liked him very much and I shall hope to meet the other 

folks you have around you.”

On the day of the opening celebration in Montreal, ac-

companied by John Fulton, Cushing, because of his ulcer, 

was not able to eat lunch at the Mount Royal Club. How-

ever, he joined the group in academic robes who were 

stuffed into taxis because of a downpour, to get from 

the Strathcona Medical Building the 100 yards uphill to 

the new Institute. In the conclusion of his Foundation 

Lecture entitled, “Psychiatrists, Neurologists and the Neu-

rosurgeon,” Cushing bestowed his public blessing upon 

Penfield. 2 No other person who trained under Cushing 

ever received such an accolade.

But in the last analysis this [specialized training in neuro-

logy and neurosurgery available at the Montreal Neurological 

Institute] will depend not upon the well-equipped edifice we 

are here to dedicate, but on those who are to control its activi-

ties. There has recently been erected at Yale a new Sterling 

Library which people come from a distance to admire. It is told 

that the librarian, apprehensive of the impression visitors might 

carry away, requested that an inscription be carved over the 

portal something to this effect: “What you see before you is not 

the Yale library—the Yale library is inside.”

So the measure of this fine Institute will not be what one 
can outwardly grasp of its carefully planned body, for that is a 
mere matter of morphology—of its soma. The real measure 
will lie in its psyche, the intangible spirit of the labourers with-
in; and for this, as we have seen, there is no standard yard-stick. 

History has repeatedly shown that an institutional esprit, how-

ever widely spread throughout a group, is primarily distilled 

from the ventricles of one of them. So we may well expect that 

under the widely trained and many-sided director of this new 

Institute neurology will receive a new impetus, making of this 

place still another mecca for workers in the great subject in 

which we all feel so vitally interested. We may rest assured that 

here not only will the story of neurology’s great past be cher-

ished but that a new and significant chapter will be added 
to it.”

After the occasion, on October 9, 1934, Penfield wrote, 

“I cannot tell you, Dr. Cushing, how happy your presence 

here made us all at the time of the opening, and how much 

your Foundation Lecture will always mean to those who 

work in the Institute here.” Cushing’s address added to 

the luster of the auspicious opening of the Montreal Neu-

rological Institute;†† Penfield’s day could not have gone 

better.

Shortly after the Institute’s opening, on October 16, 

1934, Penfield wrote, “It is rather good fun to be starting 

things in the Institute. The operating room is a delight to 

work in and the photographs of the operative field are not 

so bad.”

Penfield’s Career Matures and He Inherits Cushing’s 

Patients

As Penfield’s career ascended during these years, he be-

gan to inherit some of Cushing’s patients. On November 

8, 1935, Cushing replied to Penfield, whose letter of in-

quiry has been lost, about a patient of his in whom Cush-

ing had removed a suprasellar meningioma.

I am sorry to have these old derelicts of mine fall into the 
hands of my young friends, for I know what difficult problems 
they present. I have been sending a succession of recurrent 
acoustic tumors up to Van Wagenen and I am afraid he is tear-
ing his hair over them. Mr. Blue is an excellent fellow and 
deserves the best, and I am sure that’s what he got in your 
hands. Louise [Eisenhardt] and I of course are anxious to keep 
track of all these people, and it is good of you to have sent this 
report.

Penfield’s Special Calls On Cushing

In the last years of the correspondence, 1937 to 1939, 
Penfield actively urged Cushing to maintain his partici-
pation in meetings and associations. At this time Cush-

ing was not attending as many of these as previously. It 
appears from the correspondence that Penfield wanted 

†† After the opening ceremonies, Cushing walked across the 

street to the Strathcona Medical Building, which housed the hand-

some Osler Library. Here, surrounded by the book-filled oak cabi-

nets enhanced by the glazed coats of arms of the four universities at 

which Osler had taught generations of medical students, and with 

Osler’s ashes behind a panel under the fine bronze profile by Ver-

non, Cushing was deeply impressed. He had been brooding about 

what to do with his own splendid collection of books, and he recalls 

that on the overnight train back to New Haven he decided that he 

would do like Osler and leave his books to Yale University.
Penfield–Cushing letters

Cushing to remain very much an active participant in the academic neurological world, nearly begging Cushing at times for talks. However, Cushing’s energy level was not what it used to be. On May 1, 1937, Penfield wrote:

Would you be willing to talk to us the night of the banquet [during the 1937 meeting of the Society of Neurological Surgeons in Montreal] about any subject that may lie nearest your heart? It would mean a great deal to all of us if you would talk to us in philosophical vein. It might be as informal and spontaneous as you like to make it, provided only that you will talk to us. We do hope you will come even though you cannot spare time for all the meetings.

In a postscript Penfield tried to coax Cushing by stating that “Geoffrey Jefferson will be here at the meeting and will be called on [to speak] at the banquet.” Cushing, however, replied “It would be great fun, but I stick pretty close to my present bailiwick and avoid travel and public dinners—more particularly speaking at public dinners—as much as I can.” On September 27, 1937, Penfield invited Cushing to give the prestigious Hughlings Jackson Lecture at the Montreal Neurological Institute, “I hope you will not feel that this [Montreal] is too far off into the wilds for you to come. We would enjoy it very much. I suppose we feel we have a special call upon you because of the responsible position you hold in our Hall of Fame.”

Cushing was in the midst of his meningioma monograph and was not available to accept the invitation. On October 1, 1937, Penfield wrote:

I for one will not feel like tackling anything as serious as an effort, stating in a letter dated October 1, 1937, that “I for one will not feel like tackling anything as serious as an effort to do justice to such a lecturership as you have established until I have had time to catch my breath.”

Penfield, not to be deterred, finally succeeded in getting Cushing to speak at the December, 1937 meeting in New York of the Association for Research in Nervous and Mental Diseases.‡‡

2nd December, 1937

Dear Dr. Cushing:

I am so glad you are willing to propose a toast at the one o’clock luncheon in the Waldorf on the 27th December. I am enclosing a copy of the program which you will see indicates – A Toast to the Association.

You can make your toast just as informal as you like and as general as you like. I have always remembered the quotation which you introduced in your after-dinner speech in Berne, — “Mit Geduld und Spuke macht Mann manche Buke”. I probably have not spelled that right but I have quoted it often to young men in the Institute.

I hope that nothing will happen to prevent you from being at the meeting, and if you undertake the toast it will help Cobb and me to do something that I cannot put into words.

With best regards,

Yours sincerely,

Wilder Penfield

‡‡ Penfield was then President of the Association and Stanley Cobb was Vice President. The published proceedings of the 1938 meeting remain one of the most important contributions on the circulation of the brain and spinal cord.

21 December 1937

Dear Wilder:

I expect to be with you at the luncheon on the 27th and will offer a brief toast to Neurology, if that is what you desire, but you mustn’t expect too much of me. Just what you and Stanley Cobb propose to do with me afterward I can’t foresee, but it sounds ominous if it’s so bad you can’t put it into words.

With Merry Christmas to your household, I am

Always sincerely yours,

Harvey Cushing

Just what Penfield and Cobb did to their mentor that could not be put into words is no longer known, but Penfield was successful in enticing Cushing to speak one more time. As reported by the New York Times for December 28, 1937, Cushing in his toast to neurologists at the Waldorf-Astoria warned young practitioners against too much “scientific medicine”; harking back to his talk at McGill in 1922, when he emphasized Oslerian bedside teaching. Cushing stated, “Though [laboratory and scientific testing are] expensive, there is no objection whatever to this program, provided we don’t neglect meanwhile our primary duty – the day by day solicitous bedside observation of our patient.”

A Fated Association?

Unbeknownst to either man, their last two exchanges in 1939 would bring to a poignant close a long professional and personally rewarding relationship. The careers of Cushing and Penfield had many parallels, which perhaps neither fully realized until the end of their correspondence: their mutual associations with Osler and Sherrington, “brain dusting” trips overseas (Osler’s term) to devote time to experimental physiology and to rounds of the famous European teaching clinics, their interest in cortical stimulation and brain tumors, their connections with Johns Hopkins and the Peter Bent Brigham Hospitals, scholarly pursuits both in and outside of neurosurgery, their establishment of followers and traditions in neurosurgery, and a relationship the beginning of which was associated with World War I. Not until the end of the correspondence would either man perhaps realize that fate may early on have placed them so close.

6 April 1939

Dear Wilder:

I have just come across the enclosed letter among some ancient papers which I have not set eyes upon since the War. I think it should properly go to you, and nothing would give me more happiness than to feel that you and I were brought thus into association with Counce [W. T. Councilman] and Sherry [Sherrington]. At the same time I enclose a snapshot of Sherry taken by John Beattie last summer at the R.C.S. [Royal College of Surgeons]. The hat in the corner belongs to Lynn Thorndike, not to me. I wear a much smaller hat.

Always affectionately yours,

Harvey Cushing

24th April 1939

Dear Dr. Cushing:
I was so pleased to receive the letter of Sherrington to Counce. It shows how bitter Sherrington was during the war. I wonder if the evidence was colored by the feeling of the time. It is much easier to be unprejudiced and scientific in a physiological laboratory than it is in making international judgments. I shall keep the letter as a treasure.

I was also delighted to have the photograph although your gesture of modesty makes it only the photograph of a gesture so far as you are concerned. . . .

With my best regards and many thanks,

Yours sincerely,

Wilder Penfield

The letter sent by Sherrington to Councilman on April 16, 1916 that Cushing forwarded to Penfield is instructive not only for the opinions discussed therein by Sherrington, but more importantly for the Cushing–Penfield relationship because of its postscript. “One of my pupils here, a young American from Wisconsin, W.G. Penfield, was on the ‘Sussex’, on his way to spend some weeks at the American Hospital in Paris. His leg was broken by the explosion; he was talking with Miss Baldwin when the torpedo struck. He is in hospital, but is going on well.”

On September 16, 1939, amidst the growing turmoil in Europe, which also had engulfed Canada, Penfield invited Cushing to speak at a Montreal Neurological Institute series of talks related to the war. More than anything, however, it appears Penfield desired Cushing’s mere presence.

September 16th, 1939

Dear Dr. Cushing:

We are planning at the Neurological Institute a series of talks on war surgery and war neurology which will run through the year. We cannot, of course, tell now who will be here and who will be away on war service, but the Institute will be manned and will probably be a center for instruction in the neurology and neurosurgery of warfare.

I wonder if you would be willing to give us a final talk in the series on neurosurgery with the title of “Neurosurgery in Wartime” or something of that sort. I know you are not very keen to be asked to talk very much and I have sinned in this regard a number of times. I can only plead our great desire to have you come.

Yours sincerely,

Wilder Penfield

September 18, 1939

Dear Wilder:

If anything could induce me to put my mind once more on the neurosurgery of gunshot wounds, your complimentary invitation would do so. But my personal experience is now twenty-five years old, and I think my ideas on the subject are passe, and I would suggest your trying [Gilbert] Horrax.

It is shocking business this present world-wide demoralization, and it is difficult to know what the outcome may be. For my own part I would like to see our fleet put immediately at the disposition of Great Britain and have the neutrality act revoked. But then you know better than most people what we are like, and perhaps it is only on the seaboard that we find our ears glued to the radio; whereas the Borahs and other pacifists live in the vast middle of our country.

With love to the family, I am

Always affectionately yours,

Harvey Cushing

These are the last existing letters of the correspondence, and perhaps fittingly so; it can be said that their correspondence spanned one world war to the next. On October 7, 1939, Penfield received a telegram from Louise Eisenhower sent at 10:34 a.m., shortly after Cushing died, “Chief died quietly this morning.” Unfortunately, the letter that Penfield sent to Mrs. Cushing after her husband’s death died quietly this morning.” Unfortunately, the letter that Penfield sent to Mrs. Cushing after her husband’s death is not in the archives. Although there is no way to know for certain, Penfield may have expressed some of his most sincere thoughts in the missing letter. Mrs. Cushing’s thank-you note dated November 16, 1939, reads: “Dear Dr. Penfield, Thank you for writing. I feel upheld by the kindness & thoughtfulness of Harvey’s friends. Yours, Kate Cushing.”

The Penfield–Cushing Letters: a Treasure for Neurosurgery

Penfield conducted no other professional correspondence that lasted so long or was as sincere. Perhaps the same can be said for Cushing. Their letters are a treasure for neurosurgery; they provide unique insight into the embryonic period of the specialty and into the warm relationship between two of the most influential figures of its modern practice. Their shared outlook on neurosurgery set a standard for a philosophy of the field and training in it that has endured for more than 80 years. After a celebration of his 60th birthday that included a volume written by his pupils, Cushing wrote by hand an especially insightful and instructive missive to his protégé in response to Penfield’s philosophical contribution to the book.

April 16th/1929

Dear Penfield –

I’m flabbergasted by the Birthday Volume to which you have contributed such an interesting and timely article. What can be accomplished in your generation to make a new order of neurologist remains for fellows like you and Bailey, who have all-round training, to demonstrate. We may be setting the standard too high, too comprehensive, but it’s worth striving for. It takes a long time to make a good clinical neurologist even one of the old school, of the Spiller type for e.g.: but to expect that the Spillers of the future should also be surgical handcraftsmen is almost too much, unless we can stretch the “expecting” over the life of a Methuselah. The length of time it would take for the Spillers of the future to be surgical handcraftsmen is prohibitive. The art is long and the life short. And the measure of the life is that of the surgeon who begins to see the end at the stage when he receives Birthday volumes. How long shall we say – 15 years of preparation and 15 years as head of a neurologic clinic? Still when we have got it properly fixed there perhaps will be an arrangement whereby the neurosurgeon can continue in the clinic and laboratory without personally “surgery” – that part of the work being done by younger hands.

I’m hoping that the people in Chicago will see the light insofar as to make Bailey “Head” of a neurological department. And perhaps they will have the good sense to do the same for you at McGill.

M. C. Preul and W. Feindel
I hear most commendatory things, about what you have already accomplished, from all sides. I am proud to have had you write as though you were a “pupil”. You are wholly self-made. That beastly war prevented my seeing much of you while you were here; but if I remotely roused your interest in neurosurgery it gives me great satisfaction to know of it.

Affectionately yours,

Harvey Cushing

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All photographs in this paper originate from the Neurophotography Department of the Montreal Neurological Institute.

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