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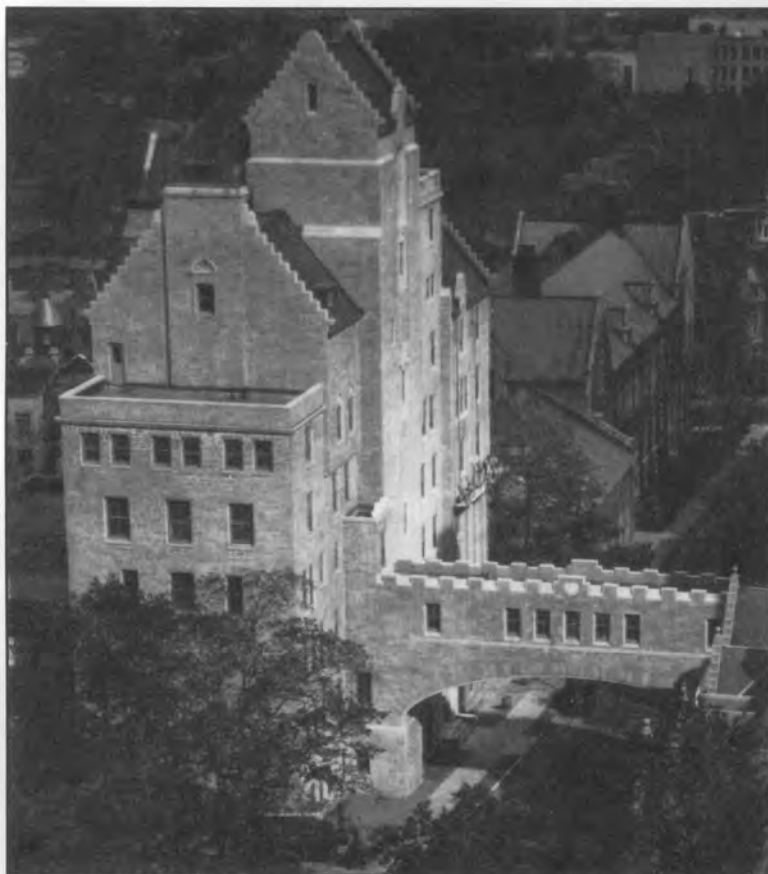
HOPITAL NEUROLOGIQUE DE MONTREAL
MONTREAL NEUROLOGICAL INSTITUTE



VOLUME 8, NUMBER 1
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CENTENNIAL CELEBRATION

WILDER PENFIELD



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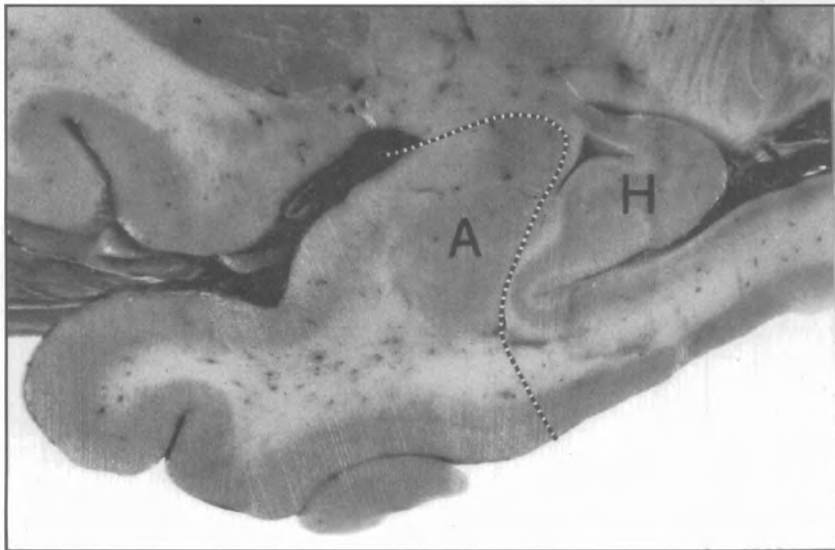
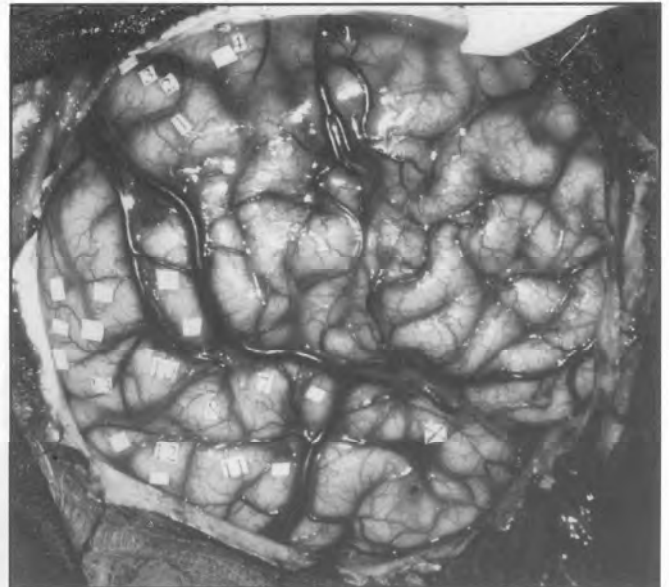


WHERE SHALL WISDOM BE FOUND
AND WHERE IS THE PLACE
OF UNDERSTANDING

1953

THE CEREBRAL
CORTEX OF MAN

1950



EPILEPSY AND
FUNCTIONAL
ANATOMY
OF THE HUMAN
BRAIN

1954

SPEECH AND
BRAIN
MECHANISM

1959



Images of Wilder Penfield (1891- 1976)

By William Feindel, OC, MDCM,
Director, Neuro History Project

A Centennial Celebration For Penfield

Wilder Penfield is recognized internationally for two great legacies - his founding of the Montreal Neurological Institute as a world center for treatment, teaching and research related to disorders of the brain and his development of a neurosurgical approach to the cure of epilepsy^{1,2}.

The portrait of Penfield by Rice (Fig.1) appears in the composite photograph of the McGill Faculty of Medicine and students of the graduating class of 1933. It depicts Penfield, handsome and dapper, with tweed jacket, neatly knotted four-in hand, the flourish of handkerchief, and a steady gaze that engages the viewer.

The centennial in 1991 of Penfield's birthday has already been celebrated at the Neuro by a symposium titled, "Exciting Beginnings: the Decisive Decade (1928-1938)". Fifteen speakers reviewed Penfield's early work at the Royal Victoria Hospital with William Cone, Colin Russel and others, as well as the activities at the MNI after it was opened in 1934, through funding from the Rockefeller Foundation, city and provincial governments and generous private donors, to McGill University.

The symposium gave glimpses of Penfield as a surgeon-scientist, his sensitivity and cordiality toward French-speaking neurological colleagues, his close relations with McGill University, his special affection for his family, his concern in the architectural design of



Fig.1- Wilder Penfield in 1932, age 41. Photo by Rice, Montreal.

the Institute, and his work with many teachers, partners and teams who established with him the Institute's recognition in the world of neurology. This present brief essay highlights some stages of Penfield's career by selected photographs from the Penfield Archive.

Professor of Neurosurgery

Penfield's major commitment was to neurosurgery and especially to the surgery of epilepsy. In a typical scene (Fig.2) he is shown suturing surgical drapes on a patient about to be operated upon under local anaesthesia. His method of draping and the frames for the trays of instruments followed the 'surgical ritual' of Harvey Cushing whom he had visited many times during the 1920s.⁸ The "Penfield mask", designed to cover the entire head and neck except for the eyes, raised some comments, but many years later was eagerly adopted by

orthopedic surgeons in their desire to reduce their surgical infection rate. The method of local anaesthesia derived from Foerster with whom he had worked in 1928 in Germany, learning from him the method of electrical stimulation to map the brain.³

Scientist

Penfield's role as a scientist antedated his decision to become a brain surgeon. His student days in Oxford studying the mammalian nervous system with Charles Sherrington, his time spent with Hortega, the brilliant pupil of Cajal, learning the Spanish neurohistological techniques, and his exposure to Foerster's systematic efforts to cure epilepsy by surgery, gave him a scientific base for his continuing study of cerebral localization. An enthusiastic teacher, Penfield (Fig.3) would intrigue medical students with his bimanual drawings of the two cerebral hemispheres and their connections to

the brainstem. His tireless dedication led to a vast number of individual papers on cytology, pathology and physiology of the nervous system and to classical monographs, such as The Cytology and Cellular Pathology of the Nervous System, and others with many of his associates- Erickson, Jasper, Rasmussen, Roberts- on the surgical analysis and treatment of focal epilepsy.¹ (see Bibliography pp.501-513)

Team work

Another photograph (Fig.4) shows him with his life-long surgical partner, William Cone, and his neurological colleague, Colin Russel, taken in 1932 in front of the Royal Victoria Hospital. This trio epitomizes Penfield's determined plan to join neurology and neurosurgery and to combine them with the basic sciences, at that time comprising mainly neuropathology and neuroanatomy. He had brooded over



Fig.2: Suturing surgical drapes. Note the overhead "Penfield mask", about 1950.

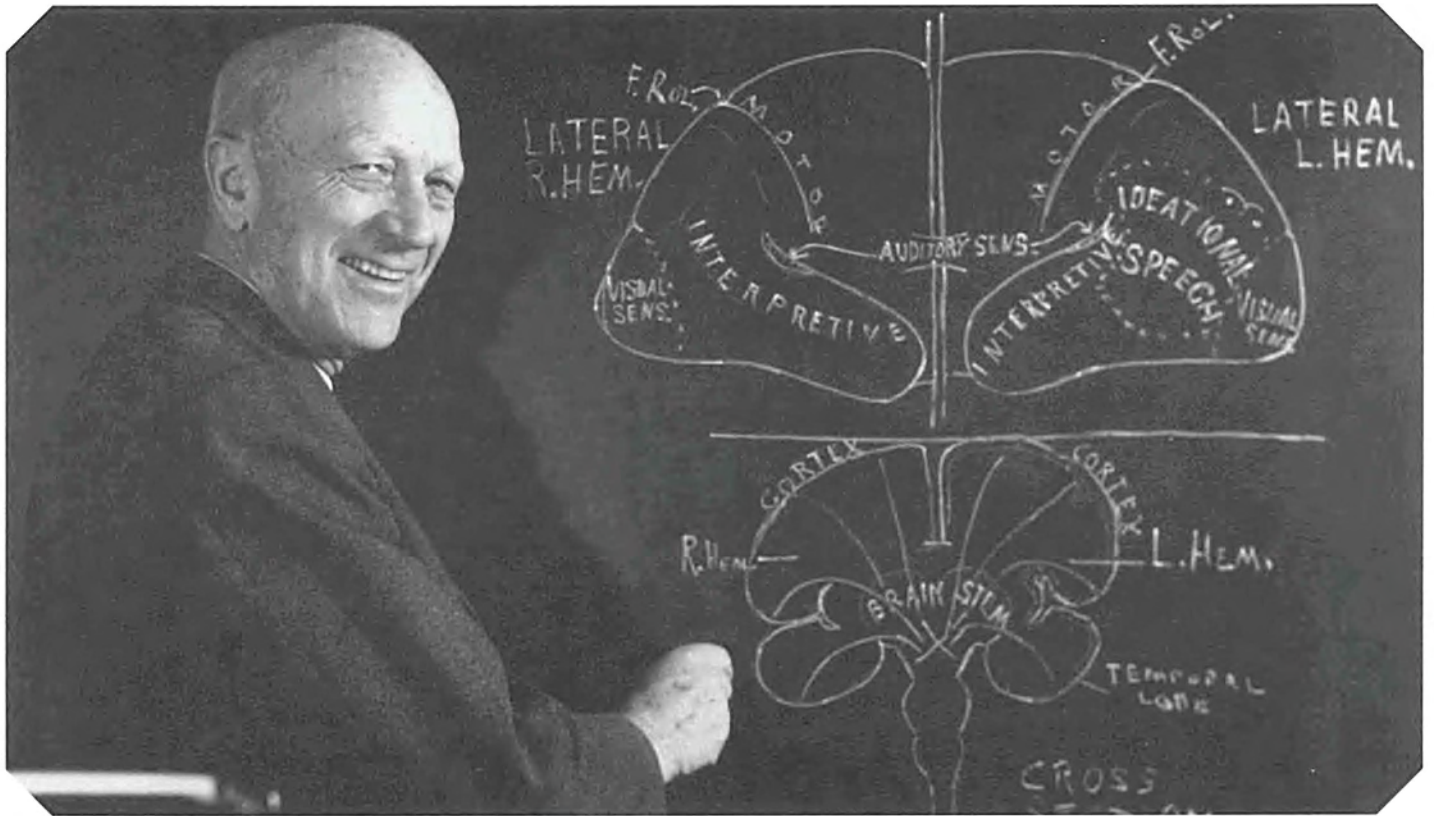


Fig.3- Teaching cerebral localisation, 1963.

this idea while visiting many clinics in Europe; in those which were most effective, neurology and neurosurgery worked together.⁸ He further realized it was the integration of clinicians and scientists that in the long term would lead to successful study and treatment of disorders of the nervous system.

Penfield was a keen competitive sportsman. He played and coached football at Princeton and continued throughout his life to take time out to enjoy tennis, skiing, and sailing, often with a win in mind.

Family matters

Above all, he was a much loved husband and father (Fig.5). The children went overseas with him and Mrs. Penfield on study trips, always deeply involved in family affairs and a style of life that left impressions carried over to the grand children⁴ As one of them wrote, "The same principles that guided his activities as head of the Neuro also informed his contribution to our large but closely

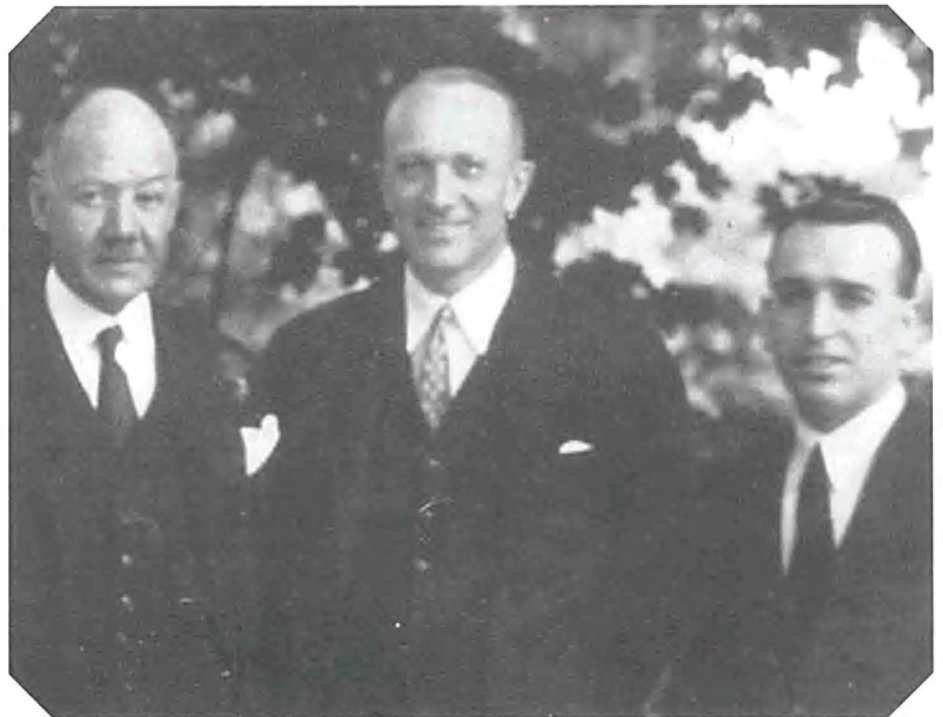


Fig.4- Colin K. Russel, Wilder Penfield and William Cone, Royal Victoria Hospital, 1932.



Fig.5 - The Penfield family, 1932.

knit family...to begin with, his strong sense of fair play and the importance to him of being part of a team.”⁹

Second Career

In 1960, he changed from active surgical practice to devote himself to writing, lecturing, travelling and public service. He is shown at the time of publication of his volume of essays, The Second Career, (Fig.6) in which he expounded his views about taking on new projects to avoid rusting in retirement.⁶

Finally, during the last decade of his life, Penfield became the venerable sage, always open to discussions on the nervous system, engaged in writing his memoirs on how the Institute was founded,⁵ and persevering in his final task, to explain the mysteries of the brain and mind. “The problem of neurology,” he once wrote, “is to understand man himself.” It seems a fitting quotation to grace the clinical and research pavilion named in his honor that was opened in 1978, almost doubling the resources of the Institute, to meet the ever-burgeoning demands of the enterprise he had founded in 1934.

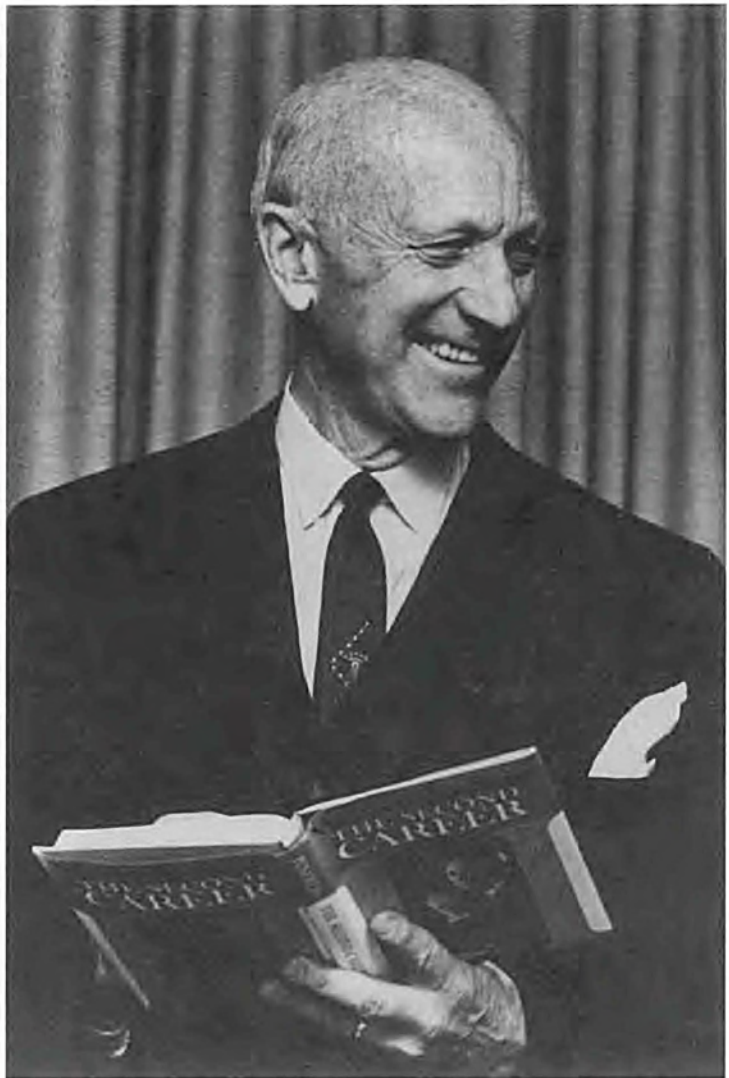


Fig.6 - At publication of The Second Career, 1963.

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Acknowledgments

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W I L L I A M C O N E

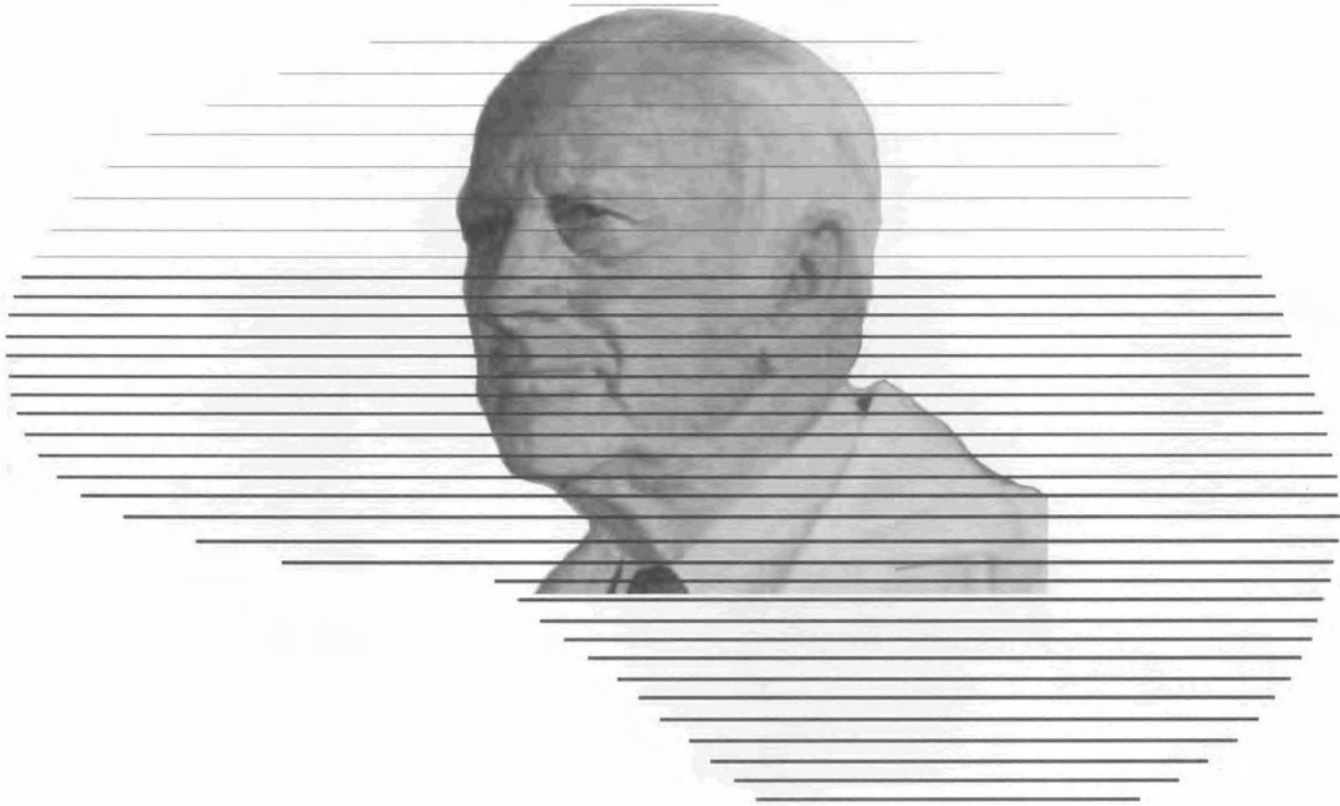


"I must confess that whatever I may have contributed to neurosurgery or to research, I have Cone to thank for making it possible to concentrate on the problem. He helped me with my patients as if he were my consultant and houseman. Because of the help I had from him, the directorship of the MNI never did weigh very heavily on my shoulders."

"There is a gay, generous, helpful spirit that has come to dwell in the Montreal Neurological Institute. Many have contributed to it, as Bill Cone did."

"Since I became a neurosurgeon, I have always been concerned primarily, of course, with the problem of one patient after another, and patients prompted many an inquiry. The patient continued to be in the foreground of my concern, but in the background there was an urge to exploration."

Wilder Penfield
THE MYSTERY OF THE MIND, 1975.



EPILEPSY, THE GREAT TEACHER

The Progress of One Pupil

WILDER PENFIELD

1966

*"The sacred disease, and madness
too, come from the brain when it
is not normal..."*



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