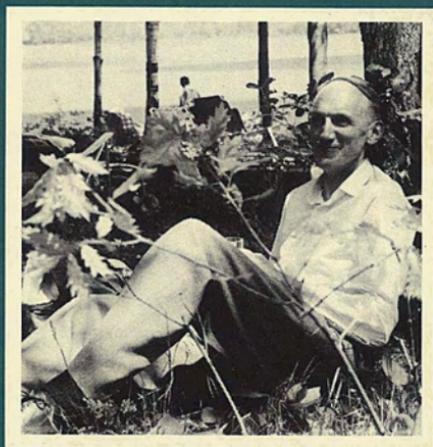


FRANCIS L. M^CNAUGHTON



1906 ~ 1986

This *MOST ENDEARING MAN*, in being a teacher, a physician, a scientist, a humanitarian, and a man of culture, was also, for many of us, the finest friend we could possibly have. His life was a unique achievement.

Francis L. McNaughton (1906-1986)

Francis Lothian McNaughton died peacefully in the Montreal Neurological Hospital on 27 February 1986. Early in March his family, friends, and colleagues met in the Hughlings Jackson Amphitheatre to pay tribute to his remarkable talents and accomplishments. This is an abridged account of the remarks made in a setting that was the centre of Dr. McNaughton's professional life for more than fifty years.

— Donald Baxter, MD

Director, Montreal Neurological Institute

The Neurologist

J. Preston Robb, MD, FRCPC
(Now an Emeritus Professor of Neurology and Neurosurgery at McGill University, Dr. Preston Robb succeeded Dr. McNaughton as neurologist-in-chief at the Montreal Neurological Hospital. Together they shared many problems, suffered a few defeats, and achieved notable successes.)

When the Montreal Neurological Institute opened in 1934, Francis McNaughton was a clinical assistant and research fellow in neurology. The institute was then the centre of neurology of all the McGill hospitals, the Montreal General, the Children's Memorial, and the Royal Victoria. Francis worked in them all.

In 1943 Francis became a staff neurologist at the MNI and in 1947, chief of neurology at the Montreal General Hospital. At the same time he was attending clinics at the Montreal Children's and the Royal Victoria Hospitals. In 1951 he took command of neurology at the MNI and began an era of teaching and research that brought neurology to a new peak.

Over the period of 17 years, Francis, with his quiet determination, was responsible for many developments that we now take for granted. In addition to his work at the institute, he was secretary and later president of the Montreal Neurological Society and a founding member and president of the Canadian Neurological Society. He was vice-president of the American Neurological Association, and the annual pilgrimages to the meeting in Atlantic City seemed the only time when we could meet and talk about plans for the ensuing year. He regularly attended meetings of the Association for Research in Nervous and Mental Diseases and the American Epilepsy Society. As president of the latter, and one of the leaders in epilepsy in Canada, he made us all aware that this was a treatable condition.

In 1959 he was named the first full professor of neurology at McGill. On retirement he was made an emeritus professor.

These events in his life do not fully describe the man. He was warm, friendly, generous, and loved by all. In spite of a modest and quiet nature, he had a firm idea of what he wished to do and was able to accomplish much where others had failed. As a clinician his skills in assessing the emotional as well as the organic aspects of a patient's problem were unsurpassed.

Saddened that he is no longer with us, at the same time we rejoice over his accomplishments and good works, and for the privilege of knowing him and working at his side.

The Scientist

William Feindel, MD, FRCS

(A neurosurgeon and active researcher, Dr. William Feindel is a former director of the Montreal Neurological Institute.)

Francis McNaughton had many jewels to his crown. One of these, his scientific work, centered on two main themes – the anatomical basis for our understanding and treatment of headache, and the diagnosis and treatment of epilepsy.

His first paper, published in 1935 during his graduate studies in Boston and London, was on the treatment of headache by a new form of an old drug, ergotamine. Back in Montreal, he demonstrated in anatomy for a year at McGill. He dissected, stained, and studied the plexus of nerves about the arteries of the brain and the coverings of the brain, the dura mater and pia mater. For this work, he received the MSc degree. But before his thesis was completed, Dr. Penfield asked him to report his findings in New York in 1937 at the Association for Research in Nervous and Mental Diseases. In a scholarly survey, Francis McNaughton reported on the nerves about the carotid arteries, the meningeal vessels, and the dural coverings of the brain. His diagram of the origin and course of nerves to these vascular structures inside the head, with question marks strategically placed where

information was then lacking, has been much reproduced. Some of these questions still remain to be answered.

McNaughton also reported with Penfield on anatomical and clinical studies of headache at the American Neurological Association meeting in the spring of 1938. Included were examples of several patients whose headache was treated surgically by dissecting the dura or cutting the first division of the root of the fifth nerve. It was this division, McNaughton had demonstrated, which gave origin to nerves of pain-sensitive areas of the dura and of the veins leading into the sinuses. Penfield wrote, "Knowledge of the pattern of pain reference and details of the nerve supply to the dura is prerequisite to discriminating radical treatment."

McNaughton's expert opinion on the diagnosis and treatment of headache and head pain was widely sought throughout his neurological career. He contributed a chapter on this subject to Meakins' *Practice of Medicine*. His reappraisal of the innovation of intracranial structures was one of his last scientific reports. He was an expert also in the diagnosis and treatment of facial pain. He provided a masterly review of the neurological aspects of shoulder pain for Fred Moseley's monograph on that topic.

The other scientific field in neurology which especially engaged his attention was the study and treatment of epilepsy. With his associates he published data on the results of new anticonvulsant drugs. He worked diligently to rationalize the international classification of the wide variety of epileptic symptoms into a system that could be used as a world reference – *The Classification of the Epilepsies*. His competence in this field is epitomized by the chapter for the book by Wilder Penfield and Herbert Jasper in 1954 and by his contributions to various journals and handbooks.

The half-life for anatomical findings is longer than for most branches of the brain sciences, where frequent recycling of hypotheses takes place. And McNaughton's contributions will stand firm among

some of those historical highlights of which he was fondly familiar, such as Leonardo's casting of the brain ventricles of the ox and Christopher Wren's drawing of the arterial circle of Willis.

Charles Symonds, the distinguished teacher at Queen Square and long-time colleague of Francis McNaughton, wrote of Thomas Willis, the 17th century founder of neurology, words that equally well apply to him: "His success as a neurologist can be attributed not only to his skill and knowledge of the anatomy of the brain and nerves, but as well to the honesty and warmth of his character. He was a pious, industrious person whose medical practice was informed by the search for truth."

The Healer

Stanley H. Knowles

(Stanley Knowles, Member of Parliament for some forty years, was a patient and friend of Dr. McNaughton.)

Almost forty years ago I developed neurologic symptoms while on an air trip from Halifax to Ottawa. Several doctors I consulted over the next few weeks told me that I had multiple sclerosis and one strongly recommended that I resign from parliament, or at least plan not to run again. I am a political person; I found this advice difficult to accept. While trying to cope with this dilemma I remembered my friends, Francis and Louise McNaughton in Montreal, and telephoned to ask if I could come to see them. I spent three or four months hospitalized under Dr. McNaughton's care. All of the appropriate tests were done, but more importantly, Francis persuaded me to make a go of it. I had a cane in my hand which he convinced me to get rid of. I was re-elected to parliament another twelve or thirteen times, and for 35 years few people knew that I had multiple sclerosis.

Four years ago I suffered a stroke and soon afterwards, Francis came to see me. We talked about my future and he admitted that a good functional recovery from a stroke might be more difficult than from multiple sclerosis. I had discovered that, unlike most people who have speech difficulties after a stroke, I could speak well even though at times I had some difficulty understanding fully. Francis encouraged me to keep active in politics, and so I have.

Francis could do this kind of thing for people.

I suggest that he gave many hundreds of other people a similar chance to live and to have a better life. He was a fine gentleman, a kindly person, and a remarkable physician.

The Teacher

A. Maxwell House, MD, FRCPC

(Dr. McNaughton trained hundreds of young men and women from all corners of the world to become clinical neurologists. He would never have agreed to choose a favourite, but if he had, it might well have been Dr. Max House, now Director of Diagnostic Neurophysiology, Health Sciences Centre, Memorial University.)

We hear and read much about medical educators and education – the buzz word is “role model.” Francis McNaughton was a role model *par excellence*. With few structured sessions, teaching instead in a small group at the bedside, he was an exemplary tutor. He taught us to listen and to communicate with our patients. A careful observer, he never rushed his assessments. The patient was always more important than the diagnosis. Tending to be conservative, he advocated watching and waiting unless there was a clear need to act. He was particularly careful to avoid invasive diagnostic procedures unless the diagnosis was in serious doubt or the examination could lead to specific therapy. The one thing that impressed me,

from my work with him, was how the patients really loved this man.

Francis McNaughton was the ultimate physician – gentle, wise, thoughtful, compassionate, and humane. A generation of Canadian neurologists and their patients owe much to this medical educator, leader, and above all, great human being.

The Staffman

Lucy Dalicandro

(Dr. McNaughton's personality won him the friendship and affection of virtually every person who worked at the Neuro. Lucy Dalicandro, a head nurse at the Montreal Neurological Hospital, worked at his side for many years.)

"Just nobody listens." How many times have we heard a patient make a similar comment, when frustrated, concerned, and afraid? Dr. McNaughton's willingness to listen to people was one of his outstanding attributes. While he listened with his ears, he also picked up non-verbal signals that told him what the patient felt. The mural in our institute board room shows Dr. McNaughton with his hands folded: observing and listening to the patient.

When I talk to attendants, nurses, secretaries, and others about Dr. McNaughton, certain of his qualities are described over and over again: "a humble person," "kind, quiet, gentle, compassionate," "a caring and concerned doctor with a beautiful smile and shining blue eyes."

His secretary of many years called him a gentle gentleman. The strongest words she had ever heard him say to a patient were "I'll be very disappointed if you don't take your medicine."

More than one nurse recalls that in the midst of a ratty day, Dr. McNaughton would come along and give her a hug of reassurance. How that helps. Another

nurse remembered a visit Dr. McNaughton made to her aunt, who had hemiplegia and speech difficulties. We positioned her on the side of the bed, her feet supported. Sitting in front of her so that he could see her face, he tested her for stereognosis function by placing a quarter in her hand and asking, "What is that"? With a great effort she replied, "You go to the store to buy... to buy ice cream with it." And then she added, "Used to." Both of them doubled up with laughter. It was beautiful to watch his ability to make a patient respond and to make her feel worthwhile, when she would not perform for anyone else.

Attendants from foreign countries remember that he always had a warm greeting for them and showed an interest in their problems with language and adjustment to this country and hospital. Lunch breaks were, for him, an important time to relax and enjoy conversations with residents, nurses, technicians, and others.

He was aware that even a small word of praise created confidence and good will. Years ago, he encouraged me to present a paper at the Neurological Nurses Conference. He read it beforehand and commented, "I'm delighted with your statement, 'Nurses can always teach doctors about rehabilitation.'"

He was always a nurses' doctor.

The Humanitarian

Wendell MacLeod, MD, FRCPC

(Dr. Wendell MacLeod, a senior figure in Canadian medicine, was a friend, a co-conspirator, and a colleague of Francis McNaughton from their early student days.)

I met Francis McNaughton when we were medical students at McGill and our friendship lasted over sixty years. Francis was the only physician I have known who had studied, beyond the survey course level, both philosophy and classical Greek. That was part of the basis of his even closer friendship with my younger brother, who had abandoned preparation for the Presbyterian ministry in favour of philosophy and psychology. Often I sat with them as they discussed such topics as this one, posed by Francis over sixty years ago: "How would you compare, as significant innovators, Karl Marx, Sigmund Freud, and Jesus of Nazareth?" Another recurring topic was Plato's prescription for attaining the good life by way of the classical triad the true, the good, and the beautiful.

Francis had a great sense of adventure in everything he did, whether it was long-distance running with McGill's Harrier Club, gardening at the summer house at Lake Memphramagog, or making models of the brain and spinal tracts. "Not very exciting," you may say. What about spending four months as labourer on a railway extra-gang, carrying railroad ties, spiking rails, spreading gravel, then teaching 'the three R's' to fellow labourers before falling asleep in the bunk-car – all in remote spots in northern Ontario or the prairies? Francis did these things with some pride and great satisfaction as a labourer-teacher under Frontier College.

In 1929, while studying in Germany, he visited Frankfurt-am-Main to learn what Gelb and Goldstein had discovered about brain function in soldiers with head injuries. This continental exposure, along with his postgraduate studies in Boston and London, whetted further his curiosity about the way in which the real values of human beings could be obscured by

layers of linguistic and cultural difference. His brand of internationalism generated a wealth of adventure, as when he and Louise received in their home the first group, they believed, of USSR scientists to come to Canada. To do so during the Cold War and McCarthy period caused eyebrows to rise, especially when the hosts described their visitors as intelligent, well informed, and completely congenial human beings. Over the years more and more international visitors were made welcome at 618 Victoria Avenue.

In 1936 Francis was a valuable member of Norman Bethune's health study and action group. After meeting almost weekly, January to June, we circulated our proposal of four experimental approaches, actuarially controlled, to provide accessible, comprehensive medical care for Quebec. By August, however, Maurice Duplessis was elected premier, the Spanish Civil War was a month old, and 'Beth' was busy planning his mobile blood transfusion service for Spain.

Despite the vivid contrast in their lifestyles, Francis became a warm admirer of Bethune. It was natural, therefore, that he would join Hazen Sise, Allan Elliott, Ted Allan, and others to found the Norman Bethune Foundation of which, until his health failed, Francis was a loyal member. This connection, along with his professional stature and well known international concern, led to an exhilarating experience in November, 1979 that he cherished greatly in his remaining years. As senior member of the Government of Canada's delegation, he visited China to commemorate the fortieth anniversary of Bethune's death.

Now back to the 1920's to introduce a theme Francis considered vitally important. In that post-World War I climate, vibrant with moods of scepticism, cynicism, but some optimism too, there was growing concern for the inequities and injustices within our Canadian society and between nations. This led many to search for valid principles of personal, institutional, and international conduct. The context for this, in the newly founded Student Christian Movement (SCM), was the Judaic-Christian heritage, often with much of

the traditional dogma set aside. The objective was to attempt a critical study of the records with a view to more objective understanding of the life and message of Jesus of Nazareth. This theme was pursued in regional and national conferences (where the spotlight tended to be on the "social gospel") but more substantially in small, on-campus study groups. Francis spoke infrequently, but very thoughtfully and always to the point.

The kernel of the concept was that the Kingdom of God was within the individual as a kind of internal integrity, peace of mind, even ecstasy, but was elusive if sought as a conscious, deliberate goal. It was a by-product of doing the will of God, which in essence had to be the individual's giving relentless primacy to living up to his highest conception of truth and goodness. This in turn should represent one's best informed wisdom (inevitably taxing the intellect to its utmost) as well as faith in the injunction of compassion, "to love thy neighbour as thyself."

With this challenge Francis was completely in tune. How best to express the basic concepts in the Nazarene's challenge and its implications for current issues absorbed Francis all his life. It was understandable that from time to time he would gravitate to the Society of Friends – the Quakers – who are given to long periods of silence in their meetings, and who then proceed quietly to do so much for the needy and for peace.

Francis had a rare, beautiful spirit, a delightful sense of humour, deep insight into the problems of humanity. In his own quiet, inconspicuous way he helped many who were downcast in spirit, ill, or in need. All who knew him will agree that in his own special fashion he has enriched our lives. Most of us, surely, are the better for it.

The Art-Lover

Louis Muhlstock

(The deep appreciation and love of visual art that Dr. McNaughton possessed were molded and enriched by his long and valued friendship with artist Louis Muhlstock.)

I was able to share with Francis McNaughton two of his special hobbies, music and art. The recorder, that least pretentious of musical instruments, suited this modest man so well. He often brought doctors from the Neuro to my studio to share his feeling for art and to share our friendship with them as well. There was hardly an exhibition worth seeing that he did not attend on his professional trips to various parts of the world. His reading on art and music made him exceptionally well informed. Though he had no money to accumulate costly works of art, he did have a collection of most interesting drawings and paintings. His hobby was collecting images of headaches. He especially loved the energy, passion, and rich colour in the works of Van Gogh, and the graphic work of the great Käthe Kollwitz for her compassion and her love of mankind and for her fight against man's inhumanity to man. I listened to music with him, I looked at works of art with him, and I was always stimulated by his comments.

How devoted he was to his patients and how kind to his friends. Around midnight one stormy Christmas, he wouldn't allow me to call a cab when it was time for me to leave. I objected to his driving me home, saying that the weather was too bad, and he replied, "But I still have to look in on a patient in the hospital."

He was indeed a great man, a humanitarian in the truest sense of the word – a *mensch* with so much *menschlichkeit*.

The Musician

Pierre Gloor, MD, FRCPC

(Presently director of neurophysiology at the Montreal Neurological Institute, Dr. Pierre Gloor shared many interests with Dr. McNaughton, particularly his interest in music.)

No tribute to Francis McNaughton would be complete without speaking of his love of music. His relationship to music was a mirror of his engaging personality: it grew out of his deep sense of what he understood to be the richest sources of the human spirit.

Deeply interested in philosophy, accomplished in ancient Greek, Francis McNaughton had absorbed the classical ideal. The sense of balance, moderation and beauty in things physical and moral inherent in the ancient Greek ideal of humanism, was perhaps most succinctly expressed by the 18th century German art historian, Winckelmann, when he described it as "die edle Einfalt und die stille Grosse" – "the noble simplicity and the quiet greatness." It is these qualities that Francis admired in the works of the human spirit and which he found in the music he loved. To us who knew him these words described also the man himself. Is "noble simplicity" not what all of us encountered in him? A dedication to high ideals without a trace of condescension, and a simplicity of manner that put everyone at ease, no matter what his stature in life? And was there not "quiet greatness" in him, in his teaching and deep understanding of neurology, which he expressed with so much modesty? Was not his Socratic approach to teaching, his wonderful art of letting you find the truth yourself under the influence of a gently prodding and questioning teacher, an expression of this "quiet greatness"?

These qualities came naturally to Francis McNaughton; they were the expression of a soul deeply anchored in moral principles which he lived, but never flaunted. They were also the fruits of a penetrating understanding of the world that made no claim to be definitive and thus left open a window to

regions full of wonder, presently and perhaps forever beyond the grasp of human understanding. Music for him was a means to keep this window open.

Not surprisingly, the music Francis McNaughton loved most was that which responded to his ideals and the salient traits of his character, the music of the high baroque, Bach and Handel, and of the early classical period, particularly Mozart. Although he respected Beethoven, he did not feel close to his music; the fist raised and defiantly shaken at implacable fate was not something with which Francis could easily empathize. Much closer to him was the serenity of Mozart, who, although no stranger to tragedy, was capable of imbuing even his tragic music with the kind of radiant, reconciling beauty that transcends adversity and defeat.

There is another facet to the Mozartean spirit that must have appealed to Francis: an understanding acceptance of the fundamental paradox of human nature, the fact that in it the sublime, the tragic, and the comic are often close to each other, often even hopelessly intertwined. The knowledge of this was part of Francis' personal wisdom. It gave him a tolerant, benevolent, and rather optimistic outlook on human nature; it fostered a gentle sense of humor in the face of human weakness and imperfection, a humor which, although often quite penetrant, was never wounding.

When Francis McNaughton spoke of the music of Bach, he hailed its vigor, its strength and breadth transcending the limitations and imperfections of our everyday world. Bach's music was for him a source of reassurance and faith, although Francis' faith was certainly a great deal less literal than that of the great cantor of Leipzig. Francis once enthusiastically gave me an issue of *Time* magazine that featured an article on Bach entitled "The Fifth Evangelist." He was very excited about it, for he felt that this title best expressed the essence of Bach's music. I suspect that of all the five evangelists, John Sebastian was Francis' favourite.

Francis McNaughton's intense enthusiasm for music is rather surprising, considering the fact that he had never been taught to play an instrument until well into his adult life, when his wife Louise once gave him a plastic recorder for Christmas. He set about to learn to play it and became an enthusiastic recorder player. Over the years he bought a number of recorders from various manufacturers and became quite knowledgeable about technical details of their construction, to the point that when he wrote to a Boston manufacturer about some fine technical point concerning the instrument, the manufacturer offered him a job, but somewhat apologetically mentioned that he could not pay him very much.

Francis McNaughton's deep musical interest in many ways expressed most clearly the essence of his character. This most endearing man, in being a teacher, a physician, a scientist, a humanitarian, and a man of culture, was also, for many of us, the finest friend we could possibly have. His life was a unique achievement. He will remain a beacon of light to illuminate our path.

During the course of the talks abridged above, Dr. Deborah Black, a neurologist and former student of Dr. McNaughton, played Bach's *Fifth Suite for Unaccompanied Cello in C Minor*.

Mario Duschenes, Dr. McNaughton's music instructor, played Bach's *Sonata for Unaccompanied Flute in A minor*.
