

# A History of Neurology in Toronto 1892 -1960: Part I

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## THE IMMEDIATE REALM OF NEUROLOGY<sup>1</sup>

### The Domain of Nervous and Mental Disease: Confounding Concepts

In the nineteenth century, advances in social and economic conditions and in biomedical science encouraged physicians in Europe, England and North America not only to seek greater understanding of the organic basis of the most severe forms of mental illness or insanity but to increasingly attend to the whole domain of nervous and mental disease. This domain extended on the one hand from overt and obvious organic disorder free of mental or behavioral components, through organic cerebral disorders associated with severe cognitive and/or psychic disturbance, to disorders with clinical features strongly suggestive of organic cause but without detectable structural pathology, and to mild disorders clearly of psychic etiology on the other.

In Germany and France particularly, gross anatomic and histopathologic studies were uncovering organic causes for an increasing proportion of the insanities; however, a very large and heterogeneous group of disorders remained, for which correlations with structural change could not be established. This included disorders now recognized as primarily organic (such as epilepsy and movement disorders) as well as disorders primarily psychic in origin, all of which came to be referred as "functional". At the turn of the nineteenth century, this group of disorders were conceptualized in "romantic-philosophic-psychologic" terms<sup>2,3</sup> implicating lifestyle and ideology in etiology. By mid-century, increased knowledge of nervous system anatomy and physiology encouraged a somatic view strongly espoused by Griesinger and Meynert among others, a view that was extended by some to all disorders with psychic symptoms. The approaches to the investigation and care of this vast domain of nervous and mental disease that now seem rational were seriously confounded by the very limited knowledge of disease mechanisms. In spite of the multiplicities of etiology and pathogenesis now recognized, which permit great precision in diagnosis, physicians concerned with the nervous system continue to experience difficulty in assigning somatic and psychic mechanisms to individual patients. Those whose disorders are of primary organic etiology continue to be mistakenly treated as though the cause was psychic and vice versa. This clinical challenge of distinguishing organic from psychic could only have been compounded many fold at the turn of the century, when neurology first appeared in Toronto.

### Contending Specialists

In Europe, the British Isles and the United States, the evolution of systems for the care and investigation of this great domain of nervous and mental disease differed. Groups with different professional backgrounds began to contend roles in the management of the domain. Advance was most rapid in

German-speaking Europe where internists specializing in diseases of the nervous system, alienists in state asylums (note 23), neurologist-psychiatrist-neuropathologists in university-sponsored hospitals and general physicians with interests in psychological disorders laid claim to part, or indeed, to the whole domain (note 1). The jurisdictional struggles among the groups in Germany was only partly resolved by the building of combined neurologic and psychiatric "kliniks" (hospitals) to be staffed by university faculty, so that "hot battles" between internal medicine and these neuro-psychiatric kliniks for the "immediate realm of neurology" continued.<sup>6</sup> Alienists and the more psychiatrically-oriented, as they are now regarded, viewed pure organic neurology as the easy province in the domain in terms of both management and research and often resented the apparent skimming by organically-oriented neurologists of the more obvious organic disorders and asserted the right to investigate and treat all forms of nervous system disease, whether organic or psychological.<sup>1</sup> Struggles between internal medicine and the neuropsychiatric kliniks for neurology have continued to the present in Germany.<sup>6</sup>

A "pure" neurology was formally institutionalized first in France with the establishment of "La Chaire de la Clinique des Maladies du System Nerveux" at the Salpêtrière in 1872 recognizing the monumental descriptive clinical-pathological work of the first occupant, Jean-Martin Charcot (note 2). In England, the founding of hospitals for epilepsy and paralysis in London fostered the study of organic disorders and the development of diagnostic precision that has come to define a neurology strongly rooted in organic neurobiology (note 3). In Britain, neurology was clearly separated from psychiatry and internal medicine but remained closely associated with the latter in the general hospitals (note 4).

In the United States, a strong alienist tradition developed in the early nineteenth century. The Civil War focused attention on organic and "functional" nervous disorders fostering a neurological specialization with strong organic orientation by brilliant physicians such as Weir Mitchell and William Hammond.<sup>10</sup> Assuming a somatic basis for the whole domain of nervous and mental disease, and frustrated by the perceived shielding by alienists of their wards from scientific enquiry, the neurologists laid claim to the entire territory and repeatedly attacked the alienist approach only to be beaten off (note 5). The Ivy League medical schools (Pennsylvania, Harvard and Columbia) established chairs

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early on, initially combining both neurology and psychiatry but soon to become divided. Internal medicine readily relinquished claim to neurology. With the establishment of federally-supported research and training programs after the Second World War, neurology separate from psychiatry gained departmental status in the great majority of American universities, thereby establishing the model of free-standing departments.

### A Discipline Defined

Contemporary Canadian neurologists have no difficulty defining “the immediate realm” of their discipline – skills and knowledge in the diagnosis and pharmacotherapy of organic disorders of the nervous system (note 6). Nowadays, management of systemic disorders, primary or secondary to the neurologic disorder, involves collaboration with subspecialists in internal medicine as does the management of psychic disorders, either primary or secondary, involve collaboration with psychiatrists and psychologists. Even though neurology has had a separate identity in Toronto for over a century, agreement as to its “immediate realm” is recent.

In this history, the inheritance of the neurology legacy in Toronto from the founders in Europe, the United Kingdom and the United States is examined. The course of development of the specialty over the first seventy years is also examined and the factors which led to an institutionalization which differed substantially from that in Europe, the United Kingdom and the United States is discussed. A major theme during the seventy years is the involvement of Toronto neurology in psychiatry with retention of its strong association with internal medicine. Neurology did not give up its activities in psychiatry until the end of this period.

### THE DAWN OF NEUROLOGY IN TORONTO 1892

Neurology as a specialty was first introduced to Toronto “fin de siècle”, when **Donald Campbell Meyers (1863-1927)** (Figure 1) returned from Europe in 1892 to establish his practice (note 7). In 1892, Toronto did not extend north of St. Clair Avenue, west of Bathurst or east of the Don River and had a population of 180,000 growing at an exponential rate. It was “no mean city”, with its reputation for moral purity and superiority already established, with its many fine public buildings, private mansions and estates,<sup>14</sup> Eaton’s and Simpsons’, the Globe, Telegram and Star, with City and Massey Halls under construction, with sanitation, cedar paved streets, horse-drawn steecars being replaced with electric ones, and with a university, three medical schools (note 8) and seven hospitals (note 9). Medical undergraduates at the School of Medicine were given lectures in neurology in alternate years by James E. Graham, Professor of Clinical Medicine and Dermatology and twelve lectures at the Asylum by Dr. Daniel Clark, the Superintendent (note 10).

Shortly after his return, Meyers established “Dr. Meyers’ Neurological Hospital”, a “Private Medical Hospital devoted exclusively to the Treatment of Functional and Organic Nervous Diseases”,<sup>16</sup> and later in 1906, the Nervous Wards of the Toronto General Hospital “for the treatment of and instruction in all Functional Neuroses, and especially those forms of neurasthenia in which the symptoms indicated that insanity might develop in the onward progress of the disease”.<sup>17</sup> The initiatives were the first of their kind in Canada (note 11). Meyers’ training was in the neurology of the time, which was strongly rooted in

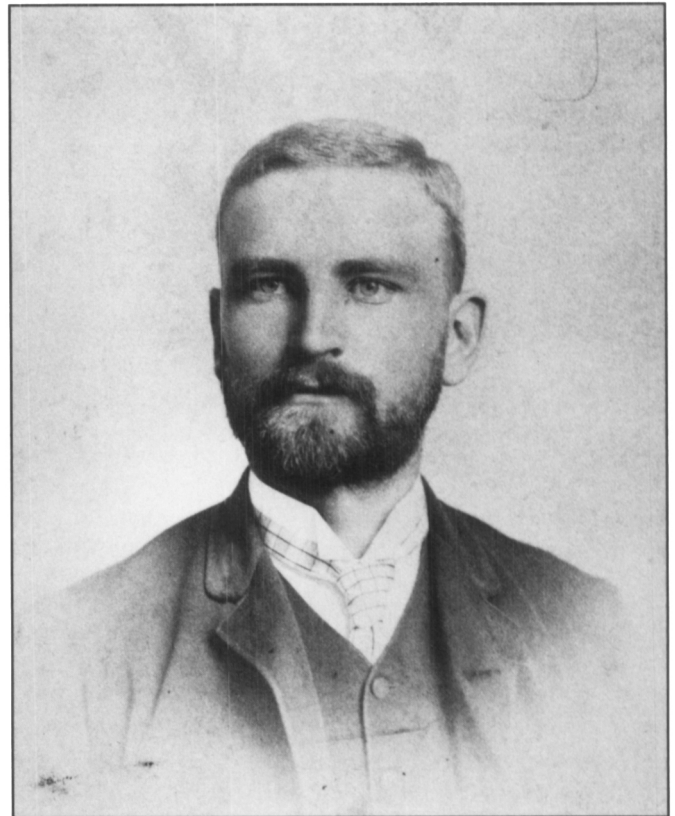


Figure 1. Donald Campbell Meyers (Archives of Ontario).

the remarkable advances in the anatomy, physiology and pathology of the brain that occurred in late 19th century Europe. All of his early publications were neurologic and he called himself a neurologist. At that time, one of the major categories of neurologic disorder included what were referred to as “functional” diseases. In the 1888 edition of William Gowers’ text,<sup>19</sup> these were described in the last section entitled “General and Functional Diseases of the Nervous System”. Included were “those in which there are no constant changes to be seen with the naked eye” (note 12). He stated further that “most of these maladies depend upon alterations in the nutrition of the nerve elements, although these may not yet have been found, and perhaps cannot be detected without more means of investigation than we at present possess” and pointed out that “classification into groups is alike difficult and useless” because they “are so different in character”. Etiology and pathogenesis was conceptualized in mechanistic organic terms. Several of the disorders are now largely the concern of psychiatry, but at the end of the century they were unavoidably the concern of neurologists such as Meyers because of the limited means available for confirming the presence of organic lesions. The knee jerk had been described in 1875, but it was not till the turn of the century before Joseph Babinski would describe his sign, Heinrich I. Quincke introduce lumbar puncture, the Wassermann test would be developed and X-rays taken.<sup>20</sup> Management of the milder forms of “functional” disease that we now recognize as psychogenic, was attractive to neurologists because it was both socially acceptable and financially rewarding.<sup>4</sup>

In recent years Meyers has been canonized by some psychiatrists as the Canadian pioneer in general hospital psychiatry. The Department of Psychiatry at the now General Division of The Toronto Hospital was named the Campbell Meyers Department on its inception in 1967.<sup>21</sup> However, his history also represents the earliest attempt of neurology to establish itself as an academic specialty in Toronto, one that was overwhelmed by the alienist legacy rather than the hegemony of internal medicine.

Meyers<sup>22</sup> was a third generation Canadian of German origin born in Trenton, Ontario in 1863. He graduated in Medicine with honours and the prize in surgery in 1888 from Trinity College Medical School (note 13). He applied for internship in the general hospitals and was unsuccessful. Unable to find a practice (there was considered to be an overabundance of doctors in Toronto<sup>25</sup>), he sailed for Britain in September 1888. After a futile search for clinical positions in Edinburgh, he settled in London to study successfully for the exams qualifying for admission to Membership in the Royal College of Surgeons (England) and for Licentiate of the Royal College of Physicians (London). In October 1889, he wrote his mother of his intention to go to Paris "where there is so much to be learned .... about nervous diseases" which were "so much in vogue".<sup>22</sup> Time was spent at the Salpêtrière where he attended Charcot's Tuesday demonstrations (note 14) and Friday lectures, and at the Bicêtre with J. Jules Dejerine<sup>22</sup> (who subsequently occupied Charcot's chair) (note 15). At some point, Meyers moved on to Vienna, where he spent six months over the winter of 1889-1890 in pathology, three with Professor Heinrich Obersteiner, owner of the Ober-Döbling Clinic and founder (with the profits from his clinic) in 1882 of the Neurological Institute in Vienna.<sup>27</sup> A testi-

monial letter (Figure 2) from Obersteiner states that Meyers studied the "finer normal and pathological anatomy of the central nervous system, especially and chiefly, the medulla oblongata".<sup>22</sup> While in Vienna, he also spent time on the wards of Theodore Meynert, who was Professor of Psychiatry, and Director of the Psychiatrische Klinik of the Allgemeinen Krankenhauses. It is not clear how much exposure he had to Meynert who died in 1892 at the age of 69 (note 16). Some accounts suggest he may also have spent time with Pierre Janet and with Emil Kraepelin in Munich,<sup>29</sup> but this seems improbable. At some point, he arrived back in London to spend nine months ending about February 1892 as clinical assistant to David Ferrier (note 17) at the Hospital for the Paralysed and Epileptic, Queen Square<sup>22</sup> (Figure 3). He appears to have been the first of many Canadian neurologists and psychiatrists to work there, preceding by several years Donald Armour, Percy Saunders and L.R. Yealland all graduates of the University of Toronto who remained in London.<sup>30</sup> On his return to Toronto, Meyers obtained an appointment at Trinity Medical College as lecturer on "the pathology of the nervous system and electrotherapeutics" (note 18). He was also appointed as neurologist to the newly-founded St. Michael's Hospital in 1892<sup>32</sup> and began conducting a practice on Simcoe Street "provided with the latest forms of electrical apparatus particularly of the static variety".<sup>22</sup> Thus, the first hospital in Canada to appoint a neurologist was the new St. Michael's Hospital on Bond Street. Meyers is listed in the Hospital's Annual Report in 1895 among five specialists (gynaecology, laryngology, ophthalmology and otology, and dermatology in addition to neurology) but no longer in 1915.

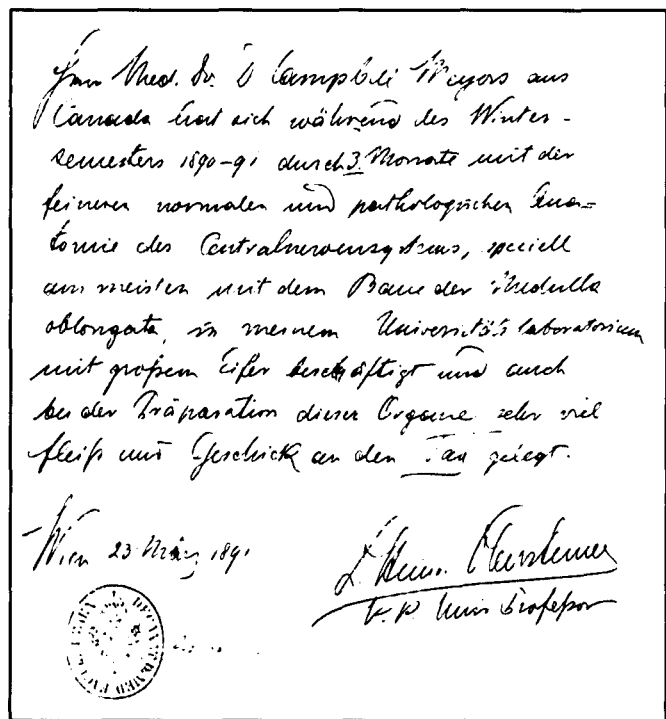


Figure 2. Testimonial letter written for Dr. Meyers by Professor Heinrich Obersteiner (Archives of Ontario).

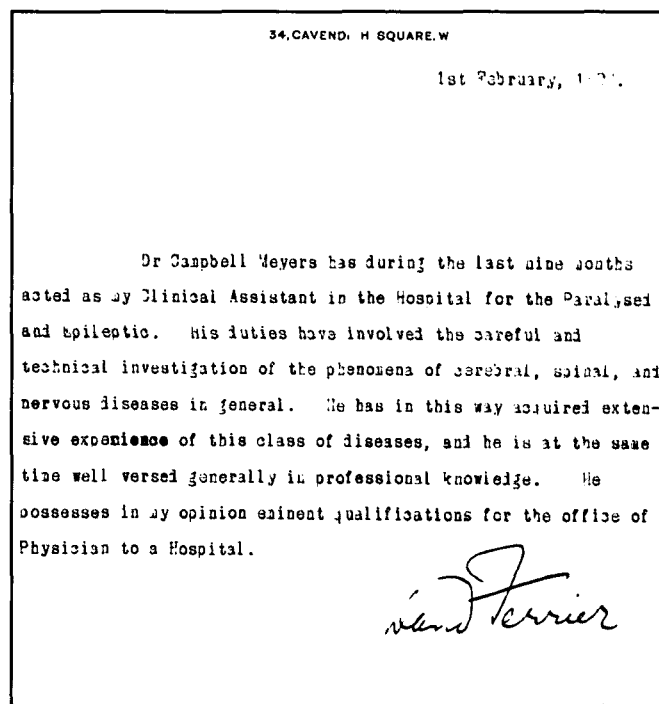


Figure 3. Testimonial Letter written for Dr. Meyers by Dr. David Ferrier (Archives of Ontario).

In 1894, he established a private hospital on Simcoe Street for the treatment of nervous diseases and in 1897 moved it to the Sanatorium built on an estate (called "Deer Park") on the north side of Heath Street between Yonge and Avenue Road<sup>22</sup> (Figure 4). In 1899, he purchased it outright for \$14,925 and continued to operate it as a "neurological hospital" until early 1920s when he retired because of ill-health (note 19). Meyers died of cancer in 1927 at the age of sixty-four.

In the brochure for the hospital,<sup>16</sup> it is stated that patients with "the various forms of Functional Nervous Disease, including Neurasthenia, Hysteria, etc., together with the morbid conditions which often accompany these Diseases, such as nervous disturbances of the stomach and other internal organs, are most frequently admitted, the Organic Diseases of the Brain, Spinal Cord, and Peripheral Nerves also receive careful attention". Medical records which have been preserved<sup>33</sup> confirm this mixture of classical neuropsychiatry among the patients. The treatments provided included hydrotherapy, massage, electricity, Swedish movements and the Weir Mitchell rest cure (note 20). Meyers' obituaries<sup>31</sup> describe him as friend and collaborator of Weir Mitchell and it is possible that he adopted "Campbell Meyers" as surname in imitation of Weir Mitchell (and Hughlings Jackson ?) (note 21). His hospital was obviously modelled on the European "neurological clinics"<sup>34</sup> and possibly the Ober-Döbling clinic of Obersteiner in particular. He embraced the contemporary concept of neurasthenia (note 22), the "great American disease" and strongly promoted the view that early treatment could reduce a high risk of progression to insanity requiring admission to an asylum.<sup>38-42</sup> Meyers published nineteen papers. His first eight were on syringomyelia, multiple neuritis, functional monoplegia, cerebellar ataxia, the knee jerk, cerebral tumour and the eye signs in hysteria. The subsequent publications are mainly concerned with neurasthenia and his attempt to establish a neurology service at the Toronto General Hospital.

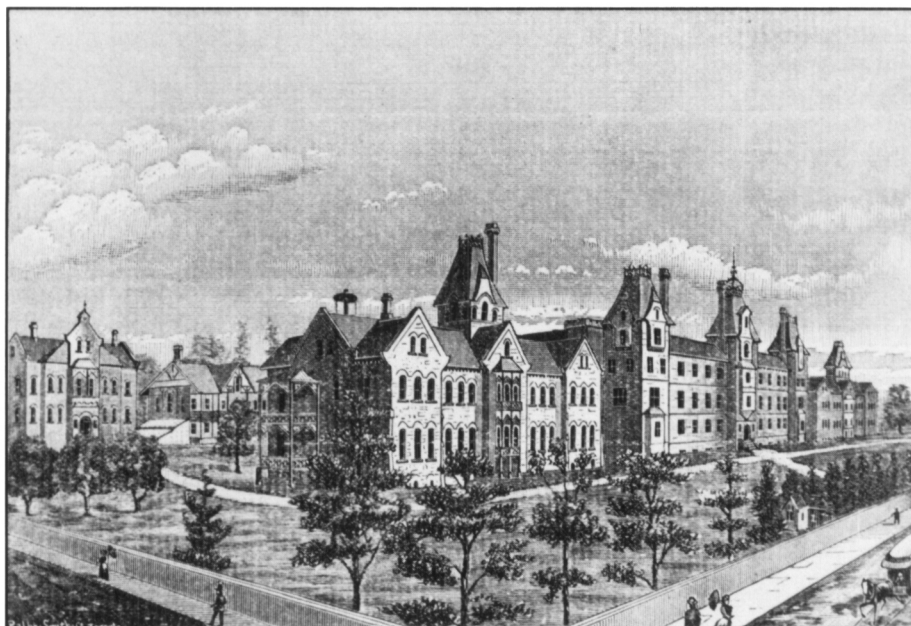
### 1905-1911: THE MEYERS-CLARKE STRUGGLE FOR NEUROPSYCHIATRY

The term psychiatry (note 23) came into widespread use in North America in the first decade of this century with the emergence of psychology, psychotherapists and psychoanalysts concerned with non-insane forms of mental disorder. Prior to this, mental disease in Canada was the preserve of provincial hospital "alienists" (note 23), trained in the country club settings of the government-run hospitals for the insane to become preoccupied with "politics and stewardship".<sup>43</sup> Little or no provision existed for management of mental disorders that did not cause those affected to become dangerous or noisy and thereby eligible for admission to asylums. Meyers was concerned about the indigent with "functional" disorders who could not be managed in private hospitals and he campaigned vigorously for beds in general hospitals to accommodate these patients. By far, the commonest neurologic diagnosis in North America at the turn of the century, was neurasthenia. The great advances in the basic neurosciences seemed to Meyers and others, such as Joseph Collins of New York, to have had little impact on neurasthenia and Meyers thought that further understanding could only come from detailed clinical study.<sup>41</sup> In 1905 he successfully persuaded the Superintendent and the Board of the old Toronto General Hospital on Gerrard Street, just west of the Don River in Cabbagetown, to establish neuropathic wards called "the Nervous Wards". A grant of \$5,000 from the Provincial Government provided for refitting of the Superintendent's residence at the east end of the Hospital property (Figure 5) and the wards began accepting patients on May 7th 1905. The wards were officially opened by the Provincial Secretary W.J. Hanna on June 14th. The unit which had 12 beds was used for assessment and treatment of "functional neuroses", that is patients without either obvious organic disease or obvious insanity most of which were to be labelled "neurasthenia".<sup>29</sup> The "wards" remained in existence only five and a half years, closing as the cornerstone of the splendid new General Hospital on College Street was being laid. Four hundred and two patients had been admitted averaging 38 years in age, 44% of which were classified as "functional". Ninety-five percent of these were considered at risk for insanity which after an average stay of 49 days was considered to have been averted in 83%.<sup>44</sup> On closure of the "wards" Meyers' appointment at the General Hospital ended and he spent the rest of his career at his private hospital in Deer Park. One can only speculate what might have developed had his neurological unit at the Toronto General been allowed to continue. A Department of Psychiatry was established at the University of Toronto in 1908, but the General Hospital did not establish a Department of Psychiatry for another 60 years. Neurology remained firmly fixed in internal medicine.

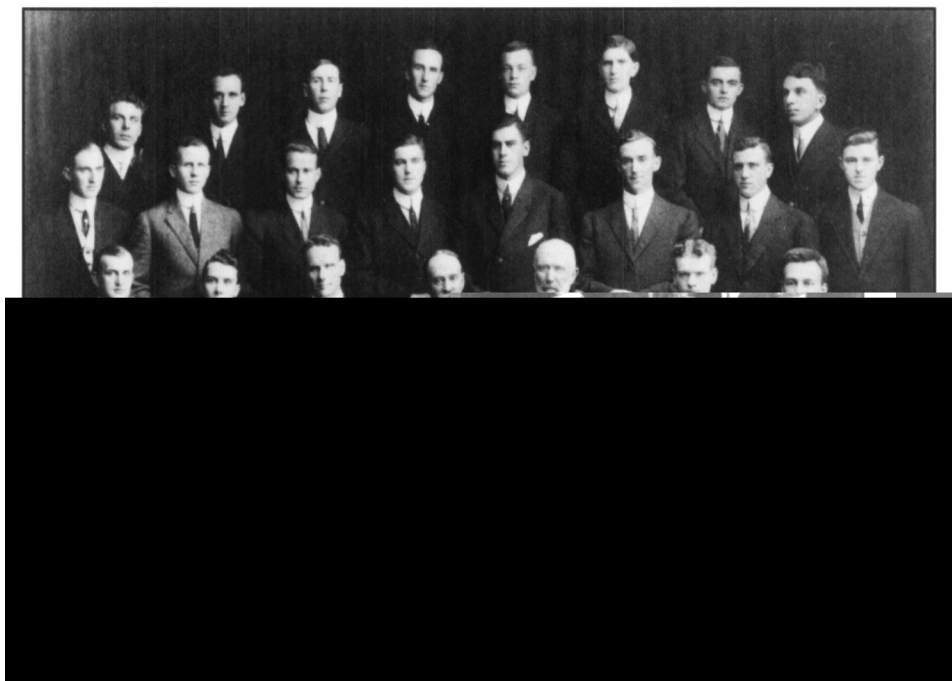
The closure of the Nervous Wards was a decision made by **Charles Kirk Clarke (1857-1924)** (Figure 6), a commanding personality who had recently entered the Toronto medical scene.<sup>45</sup> In 1905, as Meyers campaigned for a neuropathic ward in the General Hospital, Clarke – the foremost alienist in the country, was appointed Superintendent of the Toronto Hospital for the Insane on Queen Street. Son of a grit Member and Speaker of the Legislative Assembly, and a graduate of the Toronto School of Medicine in 1878, he had gained his experience at the Queen Street, Hamilton and Kingston Asylums.



Figure 4. Deer Park Sanatorium, later "Dr. Meyers' Neurological Hospital" (Archives of Ontario).



**Figure 5.** Toronto General Hospital facing south on Gerrard Street (Archives of Ontario). The superintendent's residence which accommodated the "Nervous Wards" from 1905-1911 was at the east end of the campus on Shumach Street facing the Women's Medical College Building.



**Figure 6.** C.K. Clarke with J.W. Flavelle (first row, third and fourth from the left) and the House Staff of the Toronto General Hospital, 1911 (Archives, Toronto Hospital).

Frustrated by political interference in his attempts to upgrade conditions for the insane, he had more than once planned to leave the government service for private practice, but was persuaded by family relationships and loyalties to continue. In 1885, Clarke was appointed superintendent at the Rockwood Asylum in Kington following the murder of the previous superintendent (Dr. William Metcalf, Clarke's brother-in-law) by a patient. Clarke was able to institute innovations in the humane

treatment of the insane begun with Metcalf and became more widely known for his work (note 24). In the 1893 Annual Report of the Asylums for the Insane, he had proposed that the term "Asylum" be discarded.<sup>47</sup> In his view, the institutions so designated should become hospitals concerned with diagnosis and treatment in addition to custodial care. This was a year before the famous plea by Weir Mitchell to alienists in the United States to join mainstream medicine.<sup>48</sup> Clarke also

succeeded Daniel Clark as Extra-mural Professor of Mental Diseases at the University of Toronto.

Alienists in Ontario strongly disputed Meyers' contention that any mental illness could or should be treated in General Hospitals, one view advocating the conversion of asylums to manage the milder forms of mental illness<sup>49</sup> and the other, espoused by Clarke, advocating special psychiatric hospitals separate both from asylums and general hospitals for the purpose. Clarke, as a senior servant in the Provincial Hospital system persuaded the Government to set up a Commission to resolve the issue. While Meyers' Nervous Wards were in service, the Commission, whose members were the Hon. W.E. Willoughby – a member of the provincial legislature, Edward Ryan and Clarke, travelled to Europe and Britain to view asylums and university "kliniks". It returned to recommend that a separate hospital be created (note 25). Meyers strongly rejected this recommendation on the grounds that patients with "functional" nervous diseases would be strongly averse to admission to a psychiatric hospital run by alienists and that the latter were ill-equipped by experience to manage or teach on these disorders.<sup>50</sup> Although \$100,000 had been set aside in the Provincial Estimates in early 1907, the recommendations of the Commission were not implemented for another 18 years. These government funds were re-allocated for the building of a reformatory, local philanthropy became occupied with the rebuilding of the Toronto General Hospital<sup>51</sup> and "a group of little Canadians, who feared that their personal glory might be dimmed" intervened to block it (note 26). However, Clarke persisted in his efforts to develop psychiatry. In 1908 after the Commission Report was submitted, the University established a Department of Psychiatry and Clarke became its first Professor. He was also appointed Dean of the Faculty of Medicine. He then proceeded to recruit Ernest Jones, a brilliant twenty-nine year old Welshman with considerable experience in both the neurologist and alienist camps and the future biographer of Freud. Clarke appointed him initially as pathologist and neurologist to the Toronto Asylum and the Department of Psychiatry.<sup>45</sup> In 1909, Clarke also became Chief of Psychiatric Services at the Toronto General Hospital and received approval from the Board of Trustees to establish an out-patient clinic to which Jones was appointed as director,<sup>53</sup> a service without apparent connection to the Neurological Wards of Meyers.

By 1911, the old General Hospital far from the University and immersed in the "miasmas" of the Don Valley had become inadequate to the expanding needs of the community and the now merged medical schools. Under the leadership of Joseph Flavelle (Figure 6), the Chairman of the Board of the Hospital (he had also chaired the 1906 Royal Commission on the University of Toronto), planning was underway for the new hospital at College and University on the edge of campus.<sup>54</sup> As the cornerstone was about to be laid in 1911, Clarke took on the Medical Superintendency in addition to his other responsibilities and became heavily involved in the planning for the new hospital (note 27). One of his first moves in 1912 was to "do away with the wards for nervous cases . . . in order to provide accommodation for pupil nurses" in preparation for the opening of the expanded hospital.<sup>56</sup> In doing so, he expressed his "surprise to find so many patients suffering from mental disease in the general wards of the hospital" and the "very great risk" of "a tragedy occurring in some of these instances" (note 28).

The nursing department had repeatedly pointed to the need to train additional nurses. In taking over the "Annex" which housed the Nervous Wards, Clarke reported that they had been costly to operate and the results had not been adequate to justify the outlay. In the new hospital, no space was to be provided for patients classified as "Nervous" and "the Department of nervous diseases must cease to exist as such".<sup>58</sup> Perhaps the failure of Clarke's grander plans for a psychopathic hospital and psychiatry influenced his attitude to the Neurological Wards. Concern about the cost-effectiveness of Meyers' wards is suggested in his 1909 annual report.<sup>56</sup> Undoubtedly there was scepticism over the concept of neurasthenia, the risk it posed for insanity and the efficacy of the treatment methods. The resources allocated to it were undoubtedly questioned as was the fact that Meyers was also running a private hospital concurrently, skimming off the milder neuroses and leaving the seriously ill and the complex social problems to the asylums. Beard's concept of neurasthenia had broken down with continuing experience and observation. Charles Dana in his 1904 paper "the partial passing of neurasthenia"<sup>43</sup> expressed the opinion that there was little evidence for a chemical exhaustion but that it was the psyche that gave "the stamp to the syndrome" (note 29). Joseph Collins found the causes to which neurasthenia had been attributed were implausible and noted that the term had been applied to the wide spectrum of "non-dementing insanities".<sup>59</sup> The dissenting opinion in Toronto was given subsequently by Goldwin Howland, the other neurologist at the General Hospital, in an editorial entitled "the Passing of Neurasthenia" published in a London journal in 1916.<sup>37</sup> Howland emphasized the limited utility of the term since it had been applied to so many cases in which specific organic cause had now been determined such as psychosis, systemic and focal infection, thyrotoxicosis and nutritional deficiency.

Meyers' adversary, Clarke, had many accomplishments (note 30). He had instituted innovations in the care of the insane and had a record of scholarship including the publication of papers on pure neurologic topics, including epilepsy, cerebral infarction, subcerebellar sarcoma, dysthyroidism and hereditary chorea (note 31).

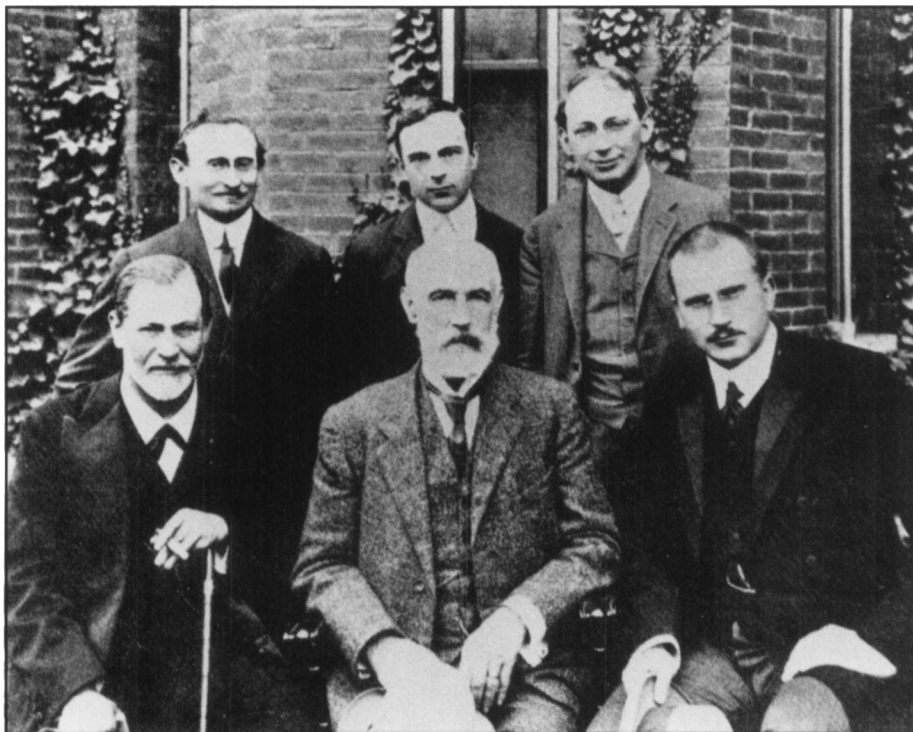
**Ernest Jones (1879-1958).** Jones spent five years in Toronto, contributing in that brief time more than a footnote to Toronto Neurology. Since undergraduate days at University College Hospital in London, he had aspired to a career in neurology and had referred to himself as a neurologist, but ultimately he gravitated to psychoanalysis becoming Freud's greatest apologist – "zealous, combative and devoted to the cause".<sup>62</sup> Jones credentials as a neurologist were considerable. As a precocious medical student at University Hospital, he became known to Risien Russell and Victor Horsley. In his last year, he spent a half-day a week at the National Hospital for Nervous Diseases with Charles Beevor. He was a voracious reader and on encountering Babinski's paper on the plantar reflex, showed it to Beevor (who had been in the habit of stroking the sole without looking for anything in particular). They tried the manoeuvre on patients at the National Hospital (presumably the first to do so there) and Jones wrote a paper about it,<sup>63</sup> his first publication. His first job as House Officer was with Horsley, where he met the surgeon Wilfred Trotter who later married his sister. Wishing to fashion his career after Russell, a West Indian with the most fashionable practice in London, Jones spent three years in a variety of house jobs in order to strengthen his qualifications for an appointment

as registrar at Queen Square. When he finally applied, he was not selected, to his great disappointment. The usual route to a hospital post in neurology now seemed closed to him. He then involved himself in a wide variety of hospital and other work over the next four years that included assistantships at Moorfield's under Marcus Gunn and externships at Long Grove, Bethlehem and Claybury Asylums. He gained experience in neuropathology carrying out research on rabies and cerebrovascular disease (note 32) and became known to the celebrated neuropathologist Sir Frederick Mott while working at Claybury. In 1905, he was appointed Lecturer in Neurology at the Dreadnought Seaman's Hospital in Greenwich and later pathologist and registrar at the West End Hospital for Nervous Diseases where he carried out studies of hemiplegia and aphasia. He became interested in Freud's work in 1906. In 1907, he spent a month in Munich with Kraepelin and Aloys Alzheimer. In 1908, he saw a 10-year old girl at the West End Hospital with hysteria and when it became known that he had inquired into her sexual experiences, he was forced to resign. He then spent six months on the continent when he visited Jung to organize the first psychoanalytic congress, met Freud, and spent more time with Alzheimer in Munich working on cortical histology and with Pierre Marie in Paris where he pursued his studies of hemiplegia and deviation of the tongue in cerebral lesions.

Jones learned that Clarke was planning a Department of Psychiatry in Toronto, so he went to Oxford to meet William Osler and with a letter of introduction from Osler, he left for Toronto in September 1908. Impressed with Jones' credentials, Clarke arranged appointments as Demonstrator in Pathology and Medicine and Associate in Psychiatry.<sup>66</sup> Jones became "lord high everything else" for Clarke, conducting pathological exam-

inations at the Asylum, carrying out psychological research, editing the *Bulletin of the Ontario Hospitals for the Insane*, lecturing and teaching at the General Hospital and directing the new out-patient clinic set up by Clarke in a little house in what was called "the Ward" on the site of future General Hospital. Jones, except for annual trips to Europe, stayed in Toronto until late 1913 and was as active as the above list suggests. He published seventy papers including a moderate number that were mainly neurological – seven on neurosyphilis including description of a modified test for globulins in the spinal fluid (Ross-Jones test) that became widely applied in North America (note 33), on glioma of the thalamus, cerebellar tumours, two on dyschiria, differential diagnosis of paraplegia, deviation of the tongue in hemiplegia, and the study of the predilection of vascular lesions for side of the brain.<sup>69</sup> He was equally active speaking, attending and organizing meetings. He became a member of the American Neurological Association and presented to the annual meeting (note 34). Although he must have known Meyers and Howland (note 35), he denied the existence of other neurologists in Canada and he travelled monthly to attend meetings of the Detroit Neurological Society.

He began to devote more of his time to psychoanalysis and while in Toronto wrote his classic papers on the Nightmare and on Hamlet and Oedipus.<sup>73</sup> American neurologists were generally quite antagonistic to psychoanalysis with the exception of James Jackson Putnam and later Smith Ely Jelliffe. Jones became "excellent" friends with Putnam who came to defend Jones on occasion (note 36). Jones was with Freud in 1909 during his only trip to North America to deliver an introductory course of lectures and, with Jung, to receive an honorary degree at Clark University (Figure 7). Freud had just visited Niagara Falls and



**Figure 7.** Ernest Jones (center, second row) with Freud and colleagues during Freud's visit to North America in 1909 (Archives on the History of Canadian Psychiatry).

travelled to the Canadian side, later expressing his relief in hearing the English spoken by the guide on the Canadian side.<sup>60</sup>

Jones left Toronto in May 1913 for both personal and professional reasons but attempted to retain a part-time appointment at the University of Toronto.<sup>75</sup> There had been further examples, to those exhibited in London, of poor judgment in his professional relations while in Toronto. Clarke was not supportive of his psychoanalytic approaches (note 37). On leaving Toronto, he engaged in the first didactic analysis, became a member of the "Committee" that was Freud's palace guard and devoted all his efforts to psychoanalysis. He is best remembered as the biographer of Freud.

## NOTES

1. The latter half of the nineteenth century saw a remarkable expansion of facilities for management of nervous and mental diseases.<sup>4</sup> For example, in Prussia, the number of public insane asylums doubled in the last quarter of the century and between 1 in 500 – 1 in 1000 individuals were confined to these institutions. An even more dramatic expansion of private facilities occurred. Starting in 1852 with 21 hospitals (clinics) in German-speaking central Europe holding 320 patients, the number had increased by 1906 to 169 holding over 16,000 patients. Almost 80% of these private clinics were profit-making but held only slightly more than half of the patients. The latter clinics represented a wide spectrum of facilities catering to a paying clientele suffering an equally wide spectrum of what are recognized to have been organic, psychotic and neurotic disorders. Demand for care in these asylums, which became referred to as nervous clinics or sanatoria, reflected needs for care of milder forms of mental disorder and the wish to avoid the public institutions with their closed wards and their stigma of insanity with its horrible prognosis. It also reflected entrepreneurial inclinations of neuropsychiatrically-inclined physicians, in competition with internists. In deference to sensitivities about insanity, these physicians were referred to as "nervenärzte" rather than as psychiatrists or alienists. Their clinics functioned mainly as sanctuaries until the turn of the century when diagnosis of systemic and neurologic disease became more accurate. The problem of differentiating neuroses from organic disease is wonderfully reflected in the concept of "neurasthenia" that emerged in the last two decades of the century in the United States and was taken up in Europe to a lesser degree, largely through acceptance of Weir Mitchell's therapeutic routine – "the rest cure".<sup>5</sup> Although concerned mainly with care of somatic disorders, activities at both the Salpêtrière and the National Hospital Queen Square were similar to those of the *nervenkliniken* on the continent. Although major neurological effort was diverted to tending the *nervenkliniken*, delineation of organic processes continued apace.
2. Along with all those pursuing organic approaches, Charcot was inevitably drawn into the conceptual struggles over the role of soma and psyche in the functional diseases. Later in his career he became preoccupied with hysteria and was partly duped into an implausible somatic characterization that proved an embarrassment to his successors.<sup>7</sup>
3. A "defining" event in this development was the publication of Ferrier's work on cerebral localization carried out, however, in the West Riding Asylum through the sponsorship of the alienist Crichton-Browne and published in the *Asylum Reports*.<sup>8</sup> Both Ferrier and Crichton-Browne along with Hughlings Jackson and Bucknill were founding editors of the journal *Brain* in 1878.
4. To the present, care of acute neurologic disorders in the United Kingdom is managed by internists with the neurologist serving as consultant.<sup>9</sup>
5. See Blustein BE.<sup>11,12</sup> The neurologists and alienists clashed in several public forums including committees of the legislature, notorious court cases and through the "media". Their somatic views were readily discounted by editorialists in the *New York Times* and other papers.
6. In Canada, the purview of neurology is determined by the Specialty Training Requirements of the Royal College of Physicians and Surgeons of Canada, the statutory body that certifies qualifications for medical specialists. The Requirements define neurology as "that branch of medicine concerned with the study of the nervous system in health and disease". Detailed objectives for training programs that must be met in order to qualify to sit the examinations of the Royal College are published and require evidence of clinical skills in determining whether "symptoms and signs are the result of an organic or psychological disorder" as well as knowledge of "the major features of the major psychiatric syndromes and their known or postulated neurochemical basis" in addition to skills in management and wide knowledge of organic neurologic disorders.
7. "Holmes sank to his waist as he stepped from the path to seize it, and had we not been there to drag him out he could never have set his foot on firm ground again. He held an old black boot in the air. 'Meyers, Toronto' was printed on the leather inside. 'It is worth a mud bath,' said he. 'It is our friend Sir Henry's missing boot.'"<sup>13</sup> Such is the evidence remaining of the introduction to neurology of Toronto's, indeed Canada's, first neurologist. The Meyers commemorated in this cryptic allusion in "The Hound of the Baskervilles" was not the boot-maker patronized by Sir Henry Baskerville during his time in Canada but Donald Campbell Meyers who met Conan Doyle either in Edinburgh or in Paris when they both attended, about November 1889, the famous lectures and demonstrations given by Charcot at the Salpêtrière. By mentioning them in the adventures of the great detective, Conan Doyle immortalized many of his friends and acquaintances.
8. The three schools were the Medical Department of Victoria University (the former Toronto School of Medicine that had been incorporated into the University of Toronto in 1887), the Trinity University School of Medicine (formerly the Upper Canada School and subsequently to become incorporated into the University in 1903), and the Ontario Women's Medical College (to become incorporated in 1906). In 1892, all three had buildings clustered around the Toronto General Hospital on Gerrard Street. Both the Trinity building on Spruce Street and the Ontario Women's building on Shumack Street survive.
9. The general hospitals were: the Toronto General located on Gerrard Street East in Cabbagetown, St. John's at the corner of Robinson Street and Euclid Avenue and the Toronto Homeopathic Hospital at Shuter and Jarvis Streets (to become the Grace Hospital at Huron and College that later merged with the Toronto Western Hospital in 1926). The specialized hospitals were: the Diphtheria Hospital, the Hospital for Sick Children which opened at its fifth location 67 College Street in 1892 and the Toronto Hospital for Incurables which opened on Dunn Avenue in 1880. St. Michael's Hospital was founded in 1892 and the Toronto Western in 1896, moving to its Bathurst Street site in 1899.
10. Clark's lectures were published.<sup>15</sup> He defines insanity as "a fixed disease, which affects and controls abnormally the language, conduct and natural characteristics of the individual". The classification is pre Kraepelin and based on a confusing mixture of symptomatology and etiology.
11. Meyers rented the Deer Park Sanatorium in 1894 for his Neurological Hospital. The Sanatorium was built by the National Sanatorium Association and its first superintendent was Dr. Charles Shomberg Elliot<sup>18</sup> who intended to operate it as a hospital for the treatment of mild nervous and mental disease. Elliot was born in Nova Scotia and graduated from Harvard Medical School in 1860 at the age of 20. After practising in Nova Scotia and Toronto, he moved to Orillia where he was a prominent physician, very active in community affairs, and medical pioneer in most of the newer townships north of Orillia. In 1888, he returned to Toronto and restricted his practice to nervous and mild mental diseases. In 1891, he built the Deer Park Sanatorium which he managed and supervised until 1897 when he sold it to Meyers and moved to Belleville because of his wife's ill health. In 1902, he returned to Toronto and continued in practice for some years, but it is not known whether he continued to specialize in nervous diseases.
12. As functional maladies, Gowers lists chorea, paralysis agitans and other forms of tremor, wry-neck, tetanus, tetany, occupation neurosis, epilepsy, convulsion, eclampsia, vertigo, neuralgias, migraine, paroxysmal and other headaches, facial hemiatrophy, paralysis after acute disease, diphtheritic paralysis, hydrophobia, metallic poisoning,



- alcoholism, hysteria, trance and catalepsy, hypochondriasis and neurasthenia.
13. William Osler passed by in 1888 to spread the word on cerebral localization in lectures delivered to the Toronto School of Medicine. These lectures were published,<sup>23</sup> but the issue of the journal is no longer available. Undoubtedly, they were based on his pathological studies at the Montreal General Hospital.<sup>24</sup>
  14. In 1917, Meyers published a study of hysteria in a male having learned about it from Charcot during the Tuesday demonstrations. Charcot is given credit for pointing out that the disorder was not confined to females.
  15. Charcot (1825-1893) became Chief of the medical service of the Salpêtrière in 1862 and the Chair of Clinical Diseases of the Nervous System was created for him in 1882. Dejerine (1849-1917), who was first chief of clinic at Bicêtre, succeeded to the Charcot Chair in 1910.<sup>20</sup>
  16. Meyers must have been well aware of Freud during his time in Vienna. Freud had spent two years with Meynert as a neuropathologist. In the late 1880's they had a dispute over Charcot's concepts of hysteria which Freud had learned first hand in 1885 and with which he generally agreed. Freud had also worked at Obersteiner's klinik in 1885 (in silk hat and white gloves). His books on aphasia and the unilateral pareses of childhood appeared in 1891.<sup>28</sup>
  17. Ferrier ("the John Hunter of Neurology") was 48 having gained fame (and notoriety among anti-vivisectionists) for his classic studies of cerebral localization in animals carried out 20 years earlier at the West Riding Asylum which gave experimental support to the clinical postulates of Hughlings Jackson.<sup>10</sup> Ferrier was knighted in 1906.
  18. Meyers held an appointment at Trinity Medical School from 1892-1896 but appears not to have been appointed to the University of Toronto at any time.<sup>31</sup>
  19. The sanatorium was built in 1891 by the National Sanatorium Association on property of about three acres that had been part of the estate of Col. Charles Heath called "Deer Park". The building accommodated 20 patients, as well as quarters for Meyers, his family and an assistant. Facilities included a laboratory and electrical and hydrotherapy rooms. Later, two small houses were built facing on Clinton (now Lonsdale) Avenue at the back of the hospital for resident physicians. Meyers was a polo player and President of the Toronto Polo Club. His family also rode and he maintained a stable on the property. It is not known if these facilities were made available to the resident physicians; if so, it would have been a unique perquisite of an appointment at the hospital. When he retired in the early 1920s, the hospital was converted to apartments and ultimately torn down.
  20. "Certain methods of renewing the vitality of feeble people by a combination of entire rest and of excessive feeding, made possible by passive exercise obtained through the steady use of massage and electricity." Mitchell's treatise on his treatment went to seven editions.<sup>5</sup>
  21. His obituary in the Canadian Medical Association Journal<sup>34</sup> was written by Lewellys F. Barker, a Toronto graduate who interned at the Toronto General and then went on to train under Osler at the Johns Hopkins Hospital. For a number of years he taught neuroanatomy at the Hopkins medical school and in 1899 published an influential text of neurohistology which was the first in which "the conduction paths of the central and peripheral nervous system were comprehensively and systematically described from the standpoint of the neurone doctrine".<sup>35</sup> In 1905, Barker succeeded Osler as Chairman at Hopkins. He had an interest in functional neurologic disorders and became a president of the American Neurological Association in 1916. Barker commented that Meyers' "neurological work, and particularly his contribution to the study and care of patients suffering from functional nervous disorders was of enduring value" and that "the advantages of the neuropathic wards at the Toronto General Hospital quickly gained recognition".
  22. Neurasthenia was a widely accepted clinical disorder characterized by Beard in his 1869 paper.<sup>36</sup> The term was used to classify symptoms of flagging mental or physical function that could not be accounted for by obvious gross or histological disease. It is hardly surprising that a very wide spectrum of the systemic, neurologic and psychiatric disease which we now recognize would be labelled "neurasthenia" in view of the imprecise diagnostic capabilities of the time. Other factors including acceptability of the concept as an inoffensive rationalization by neurotic patients fearful of insanity and financial convenience for physicians promoted expansion of a neurologic specialty and persistence of the concept [See Shorter<sup>7</sup>]. Although it was still the most common neurologic diagnosis at the Toronto General and St. Michael's Hospitals in 1915, it was shortly discarded by Toronto neurologists.<sup>37</sup> Gowers in 1888<sup>19</sup> surely had it right. "There is no more justification for regarding neurasthenia as a definite malady to be distinguished from others and separately described, than there is for adopting a similar course with respect to 'debility' among general diseases". "It is better not to gratify the craving for nomenclature that is manifested by many patients, but rather to explain to them that to give to their ailments a definite name would involve more error than truth."
  23. The term "psychiatry" was coined in 1803 by Reil<sup>2</sup> and was used widely thereafter in Europe. "Alienist" refers specifically to medical doctors who became administrative directors of asylums for the insane in the 19th century. The term derives from "alienation" which had been used since the time of Hippocrates (alienatio mentis) to refer to the estrangement in belief and sensory perceptions from the reality of other men that characterizes insanity.
  24. See Burgess.<sup>46</sup> Metcalfe and Clarke's removal of restraints and institution of work as therapy were innovative in Canada, but many decades behind enlightened European practice introduced by Pinel and by Hill in England.<sup>2</sup>
  25. The Commissioners were greatly impressed by the Psychiatric Klinik in Munich under the direction of Kraepelin. Clark's attitude to neurology may be inferred from the Report<sup>1</sup> which strongly endorsed Kraepelin's comment on the function of the Klinik - "In a number of newly formed Clinics, the treatment and teaching has also been extended to the province of nerve diseases. Greisinger, and after him above all, Westphal and his school have strongly emphasized the fact that mental diseases simply form a special group of nerve diseases and therefore may not be separated from them. "Undoubtedly, the example of neurology, which has advanced so rapidly in the last ten years, cannot be too highly valued by the alienist, because it refers him to the careful observation and examination of all bodily disturbances, and above all to the thorough investigation of the finer formation of the brain-structure and its changes in disease. That does not alter the fact, however, that insanity and nerve trouble stand quite independent of each other in the realm of medicine, and further, that it cannot be denied that neurology has gained far more than psychiatry has from the zealous work of the alienists. Psychiatry has had to stand aside, and investigators have chosen the more accessible and hopeful questions of neurology. Brain-tumours and rare diseases of the spinal column have always found willing workers in the Psychiatric Clinics, as the contents of our publications and the reports of our meetings show; while the great unexplored realm of Seelenheilkunde (soul-healing science) has lain fallow. "This very development has been one of the most important causes of the estrangement between clinic and asylum, and which has had a retarding influence on the scientific life in the asylums. The practical alienist was cut off for reasons not far to look for, from the study of nerve diseases so important to him. To the question which his daily work brought before him, his guides and teachers had no answer; indeed scarcely any understanding. For this and other reasons I cannot join the majority of my colleagues, in the hot battle that has again broken out between inner medicine and psychiatry over the immediate realm of neurology. "Although I am of the opinion that a thorough neurological training is indispensable to the alienist, and vice versa the neurologist requires even more psychiatry. "We have to conquer a large province which up to the present the isolation of the insane asylum has made difficult. The large group of so-called nervous diseases: that is, the patients who really need the help of the psychiatrist, but who are not in the ordinary sense, mentally affected, or who could not be taken to the asylum, we claim with a perfect right. We demand a free reception and a free department for their treatment in our Hospitals."

26. Clarke<sup>52</sup> was referring to his former colleagues in the Ontario Asylums, rather than Campbell Meyers.<sup>51</sup>
27. He also wrote a history of the hospital.<sup>55</sup>
28. Severely traumatic personal experiences must have convinced Clarke that admission of mentally disturbed patients to a general hospital posed an unacceptable risk. The first occurred in 1885, while he was Assistant Superintendent at Rockwood.<sup>57</sup> While rounding with the Superintendent Dr. Metcalf, also his brother-in-law, a patient attacked Metcalf with a home-made knife dealing a mortal wound. Clarke struggled with the assailant and then carried his brother-in-law for help. Some years later, Clarke nearly suffered the same fate as his brother-in-law when a patient dragged him off the Rockwood grounds into Lake Ontario and attempted to drown him, rescue coming from the passing blacksmith. These events may well have shaped the history of neurology in Toronto.
29. This paper read at the Boston Society of Psychiatry and Neurology by the distinguished New York neurologist is typical of publications on neurasthenia at the turn of the century. The confusion about and misunderstanding of the clinical phenomena being observed seems only too obvious now but the earlier interpretations were ingenious. Freud was the master of interpretation, of course. Dana's paper seems quite unscientific, full of humour and rhetorical evasions, random associations and speculations, but nevertheless revealing a kernel of truth and a spirit of reconciliation with psychiatry.
30. Described as "a man of parts" by Jones,<sup>60</sup> Clarke was, in addition to his medical accomplishments, Canadian doubles tennis champion, a violinist with the Toronto Symphony Orchestra and an ornithologist (his collection of bird's eggs formed the basis for the collection at the Royal Ontario Museum).<sup>45</sup>
31. In spite of his treatment of Meyers Nervous Wards, Clarke was not oblivious to neurologist-neuropsychiatrists. Clarke presided at the meeting in 1918 when the Canadian National Committee for Mental Hygiene was formed. Among those in attendance were Goldwin Howland, Colin Russel and Mrs. Campbell Meyers. Russel was Professor of Neurology at McGill and consultant to the Department of Soldier's Civil Re-Establishment and to the Army Medical Corps and would later collaborate actively with the Committee of which Clarke became Medical Director.<sup>61</sup>
32. When he applied to the National Hospital, one of the people who interviewed him was William Gowers. Jones claims<sup>60</sup> that as a result of their discussion, Gowers suggested that he undertake a project to determine if there was a hemispheric predilection for lesions causing stroke. He spent the next several years intermittently working on this project, reviewing case records at several hospitals and all of the published cases he could locate and as well taking a course in mathematics in order to understand the significance of his findings. This work was finally published,<sup>64</sup> while he was in Canada. He concluded that there was no predilection for either occlusive or haemorrhagic lesions causing hemiplegia. More recent work in Toronto<sup>65</sup> suggests that a slightly different position of the carotid bifurcation in the neck puts the left side at greater risk for development of atherosclerosis and hemisphere infarction.
33. The test<sup>67</sup> was one of the "qualitative" precipitation tests for globulins in the spinal fluid. It was still widely used in North America in the late 1930s.<sup>68</sup> The test detected a ring of precipitation at an interface between the spinal fluid and a concentrated solution of ammonium sulphate. Its competitors were the Nonne-Apelt and Pandy tests, used more widely in Europe.
34. Jones was in Toronto from September 1908 to May 1913 and during that time attended meetings in Europe in 1909, 1910 and 1912 as well as 15 meetings in the United States.<sup>60</sup>
35. Jones had applied to Queen Square in 1903<sup>60</sup> when Howland was registrar.<sup>70</sup> On December 10, 1908 he wrote to Freud that "no neurology is taught here at all, for there is no one who even pretends to know anything about it."<sup>71</sup> "Such cryptamnesias, which occasionally appear in Jones' autobiographical writings, as in the writings of Freud himself, are open to interpretation."<sup>72</sup>
36. See Jones' autobiography.<sup>60</sup> One of the detractors was Joseph Collins, a founder of the New York Neurological Institute in 1909 and successor to Dana as Professor of Diseases of the Mind and Nervous System at the New York Postgraduate Medical School. Collins was a neuropsychiatrist of considerable literary and linguistic accomplishment.<sup>74</sup> Ernest Jones has portrayed him as a "virulent"

- opponent of psychoanalysis. He implies in his letters to Freud that this was because he had psychoanalysed Collins' wife and "it had resulted in her summoning courage to leave him because of his cruelty". Jones claimed that Collins and another neurologist (possibly Bernard Sachs) had travelled to Toronto to attempt to discredit him during a symposium on psychoneuroses he had organized for the 1910 Annual Meeting of the Canadian Medical Association held in Convocation Hall. Collins paper,<sup>59</sup> given at a time when public medical discourse was often colourful and acrimonious, seems thoughtful and balanced and in the light of intervening years, is a generally perceptive discussion. Collins considered Freud a mystic.<sup>74</sup>
37. Clarke was antagonistic to psychoanalysis,<sup>52</sup> but in other respects was a loyal supporter of Jones. It is to be hoped that Clarke will not be remembered ultimately for his comment on psychoanalysis: "an ordinary reader would gather that Freud advocated free love, removal of all restraints, and a lapse into savagery"<sup>71</sup> now perpetuated in Jones' biography of Freud<sup>28</sup> and in his autobiography<sup>60</sup> and in subsequent historical studies.

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