Document généré le 16 avr. 2024 03:41

Scientia Canadensis
Canadian Journal of the History of Science, Technology and Medicine
Revue canadienne d'histoire des sciences, des techniques et de la médecine

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Volume 32, numéro 1, 2009

Medical Sciences and Medical Buildings

URI : https://id.erudit.org/iderudit/037629ar
DOI : https://doi.org/10.7202/037629ar

Aller au sommaire du numéro

Éditeur(s)

CSTHA/AHSTC

ISSN

0829-2507 (imprimé)
1918-7750 (numérique)

Découvrir la revue

Citer cet article

Theodore, D., Burke, S. D. & Adams, A. (2009). Tower of Power: The Drummond Medical Building and the Interwar Centralization of Medical Practice. *Scientia Canadensis*, *32*(1), 51–68. https://doi.org/10.7202/037629ar

Résumé de l'article

Cet article examine le Drummond Medical Building (1929) à Montréal, édifice conçu par la réputée société d'architectes Nobbs & Hyde, pour une étude de cas de la nouvelle typologie qui a vu le jour dans les villes canadiennes au cours des années 1920 : un immeuble en hauteur, moderne, construit à l'intention des professionnels de la santé, muni d'ascenseurs, de téléphones, d'un stationnement intérieur et de commerces de détail, situé dans un district commercial aisé. Quel rôle les immeubles en hauteur à vocation médicale ont-ils joué dans la pratique de la médecine moderne? Nous avançons l'hypothèse que ces cliniques ont marqué la fin de la période domicile-bureau au Canada et le début de la centralisation de la pratique des professionnels de la santé. Le présent projet, subventionné par les Instituts de recherche en santé du Canada (IRSC), montre les réseaux sociaux et physiques complexes qui existaient entre les architectes et les médecins et il signale l'importance d'étudier l'architecture comme technologie dans l'histoire de la médecine moderne.

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Tower of Power: The Drummond Medical Building and the Interwar Centralization of Medical Practice[1]

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Abstract: This paper focuses on Montreal's Drummond Medical Building (1929), designed by the well-known architectural firm of Nobbs & Hyde, as a case study of the new typology that emerged in urban Canada in the 1920s: a modern, purpose-built high-rise for healthcare professionals, with elevators, telephones, indoor parking, and retail shops, located in an upscale commercial district. What role did medical high-rises play in the practice of modern medicine? We speculate that these clinics marked the end of the house-office era across Canada, centralizing the practice of healthcare professionals. This CIHR-funded project illustrates complex social and physical networks among architects and doctors, drawing attention to the importance of studying architecture as a technology in the history of modern medicine.

Résumé : Cet article examine le Drummond Medical Building (1929) à Montréal, édifice conçu par la réputée société d'architectes Nobbs & Hyde, pour une étude de cas de la nouvelle typologie qui a vu le jour dans les villes canadiennes au cours des années 1920 : un immeuble en hauteur, moderne, construit à l'intention des professionnels de la santé, muni d'ascenseurs, de téléphones, d'un stationnement intérieur et de commerces de détail, situé dans un district commercial aisé. Quel rôle les immeubles en hauteur à vocation médicale ont-ils joué dans la pratique de la médecine moderne? Nous avançons l'hypothèse que ces cliniques ont marqué la fin de la période domicile-bureau au Canada et le début de la centralisation de la pratique des professionnels de la santé. Le présent projet, subventionné par les Instituts de recherche en santé du Canada (IRSC), montre les réseaux sociaux et physiques complexes qui existaient entre les architectes et les médecins et il signale l'importance d'étudier l'architecture comme technologie dans l'histoire de la médecine moderne.

Scientia Canadensis 32, 1 (2009) : 51-68

Introduction

One of the understudied themes in the history of modern urban medicine is the changing place of practitioner-patient encounters. The doctor no longer visited patients at the patients's homes; instead the patients visited the doctor's private medical office.[2] That office could either be part of the physician's home, or a separate space such as the office kept in downtown Montreal in 1890 by ophthalmologist Frank Buller.[3] This change has been diagnosed as part of a general twentieth-century trend to a separation of home and work.[4] But specifically, for doctors, the salient factors include a series of technological developments in medical science, urban transportation, business practice, and communications.[5]

The medical arts building—a multistory tower housing individual medical offices, group practices, and diagnostic services—is both symbol and motor of this transformation. Appearing across Canada and indeed throughout North America shortly after World War I, these buildings were modern high-rises for healthcare professionals, with elevators, telephones, indoor parking, and retail shops, located in upscale commercial districts. Such purpose-built office towers are particularly important in the development of healthcare from a set of philanthropic, home-based and religious institutions to a centralized business- and science-oriented service industry.[6] Patients metamorphosed from grateful beneficiaries of physicians' care to educated consumers of a complex, government-sponsored network. This dramatic transmutation, although never entirely complete, happened thoroughly and rapidly, first through the establishment of doctors' offices,

1. This study is funded by the AMS/Hannah Institute for the History of Medicine/CIHR. We gratefully acknowledge the help of François-Xavier Caron, J.T.H. Connor, Jennifer J. Connor, Natalie Ludlow, Sherry Olson, and Julia Tischer.

2. See Annmarie Adams and Stacie Burke, "A Doctor in the House: The Architecture of Home-offices for Physicians in Toronto, 1885-1930," *Medical History* 52, 2 (2008): 163-94.

3. Photographs of Buller's consulting room are available online at http://www.mccord-museum.qc.ca/en/collection/artifacts/II-93206 (accessed May 11, 2009). He shared the office with Dr Birkette; see also photographs II-93207, II-93208, and II-93205.

4. On the home/work separation in the medical profession, see J.E. Turnbridge, "Separation of Residence from Workplace: A Kingston Example," *Urban History Review* 3 (1978): 23-32; Neil Larry Shumsky, James Bohland, and Paul Knox, "Separating Doctors' Homes and Doctors' Offices: San Francisco, 1881-1941," *Social Science and Medicine* 23, 10 (1986): 1051-57.

5. Historian Paul Starr points in particular to the importance of the telephone network, which allowed physicians to schedule patients at prearranged times. *The Social Transformation of American Medicine* (New York: Basic Books, 1982), 76.

6. Charles Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (New York: Basic Books, 1987). For a description of this change in Canada, see David Gagan and Rosemary Gagan, *For Patients of Moderate Means: A Social History of the Voluntary Public General Hospital in Canada, 1890-1950* (Montreal/Kingston: McGill-Queen's University Press, 2002).

and second with the centralization of offices in medical arts towers. The material complement to doctors becoming entrepreneurs and patients turning into consumers was the literal rise of the medical arts tower.[7]

In this article, we present Montreal's Drummond Medical building (fig. 1) as a case study from an ongoing comparative study of four significant buildings constructed about the same time: the Medical Arts Buildings in Toronto (Marani, Lawson & Paisley, 1929), Montreal (Ross and Macdonald, 1922), and Winnipeg (J.D. Atchison, 1922), and the Drummond Medical Building (Nobbs and Hyde, 1929) in Montreal. These buildings are usually studied and appreciated for their formal qualities. This paper instead seeks to understand the medical arts tower as the symbolic end of the home office era, as an icon of centralized healthcare, and as the advent of the healthcare consumer. We will concentrate on three aspects that present these towers of power—powerful, we argue, because they consolidated the emerging business of medical practice—as instruments of change in the history of medicine: 1) skyscraper construction; 2) the centralized medical district; 3) and provision of parking. The study's broader goal is to set healthcare architecture in a cultural landscape that embraces the history of technology.[8] Overall, our methodological approach relies on the work of scholars such as Henry H. Glassie, Paul Groth, and Bernard L. Herman, who see architecture as material culture that sometimes underpins, sometimes influences, social and intellectual change.[9] Architectural historian Dell Upton, for example, insists that architecture is "the entire cultural landscape... all sorts of building, at all scales, made by all [people]."[10] As recently as April 2005, at a presentation to the "Reconceptualizing the History of the Built Environment in North America" conference, Upton has called for a more sophisticated understanding of the

7. The designation of medicine as an art (i.e. as *techne*; *ars medicina* in Latin) goes right back to Hippocrates. The first use of the term Medical Arts for the kind of medical office building discussed here remains unknown.

8. For an extended exploration of medical architecture qua technology, see A. Adams, K. Schwartzman and D. Theodore, "Collapse and Expand: Architecture and Tuberculosis Therapy, 1909, 1933, 1954," *Technology and Culture* 49, 4 (2008): 908-42.

9. Henry H. Glassie, *Folk Housing in Middle Virginia: A Structural Analysis of Historic Artifacts* (Knoxville: University of Tennessee Press, 1975); Paul Groth, *Living Downtown: The History of Residential Hotels in the United States* (Berkeley: University of California Press, 1994); Bernard L. Herman, *Town House: Architecture and Material Life in the Early American City, 1780-1830* (Chapel Hill: University of North Carolina Press, 2005). For a similar orientation based on the material culture of theoretical and practical physics, see Peter Galison, *Image and Logic: A Material Culture of Microphysics* (Chicago: University of Chicago Press, 1997).

10. Dell Upton, *Architecture in the United States* (New York: Oxford University Press, 1998), 12. Medical historian J.T.H. Connor has also called for a material culture approach to the history of medical buildings; J.T.H. Connor, "Bigger than a Bread Box: Medical Buildings as Museum Artifacts," *Caduceus* 4, 2 (1993): 119-30.

political economy of the built environment which takes into account the complex cultural linkages required to design and construct buildings.[11]

Figure 1. The Drummond Medical Building.

Source: McGill University, John Bland Canadian Architecture Collection.

The Drummond Medical Building

The Drummond Medical Building is the major commercial building designed by Scottish architect Percy Erskine Nobbs (1875-1964).[12] Nobbs arrived in Canada in 1903 to teach at McGill University. He formed a partnership with George Taylor Hyde in 1909; they practiced together until 1944 designing houses, numerous buildings for McGill University, and three schools for the Protestant School Board.[13] The Drummond Medical

11. Dell Upton, "Gehryism: American Architecture and the Cultural Authority of Art," paper presented at the "Reconceptualizing the History of the Built Environment in North America" conference, Charles Warren Center, Harvard University, April 2005.
12. For Nobbs' career, see Susan Wagg, *Percy Erskine Nobbs: Architecte, Artiste, Artisan/ Architect, Artist, Craftsman* (Montreal/Kingston: McGill-Queen's University Press, 1982).
13. Percy Nobbs, "Three Montreal School Buildings; Nobbs & Hyde, Architects," *Construction* 6, 12 (1913): 457-61.

Building was their last commercial building in a series that included the Canadian offices of Liverpool and London and Globe Insurance. Specifically, the Drummond Building was commissioned as an investment by jewelers Henry Birks and Sons, who had previously commissioned Nobbs & Hyde to build workshops and stores in Winnipeg and Montreal.

Nobbs, writing under the pen name Sinaiticus, described the "genesis" of the ten-storey Drummond Medical Building purely in terms of parking and profit:

> The intention was to erect a garage building between St. Catherine and Sherbrooke Streets, which it was estimated would prove to be a profitable investment to its sponsors [Henry Birks and Sons]. Unfortunately there exists a by-law which prohibits the erection of a garage building within this somewhat exclusive area facing upon the streets. The architects solved the problem by designing a tall office building extending the entire width of the lot one room deep until the garage in the rear is surmounted.[14]

In other words, the building came to be based on urban, commercial, and pecuniary imperatives, not primarily medical interests. According to Nobbs, the goal of the project was first of all to make a profitable investment, second to provide parking facilities; the provision of healthcare is only a tertiary factor.

Nobbs and Hyde designed in a mode touted as following "modern tendencies with a scholarly restraint."[15] Since its opening in 1929, the design has been considered one of the outstanding examples of Canadian Art Deco, notable for its cut-stone decoration at the base, careful proportions, and blue and gold terra cotta panels underneath the windows incorporating a small medical cross.[16] The up-to-date-styling had a three-part message. First, it symbolized the commercial enterprise of modern medicine, implying that doctors were in business. Second the stylishness of the architecture echoed the stylishness of the clientele—which is also the reason for the elegant lobby. Finally—and perhaps most difficult for us to read—the exterior signified scientific medical practice: a progressive modern building enhanced a doctor's image as a progressive practitioner of modern medicine.

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14. Sinaiticus, "The Drummond Medical Building, Montreal," *Construction* 23, 9 (1930): 303.
15. Ibid., 303.
16. Susan Wagg describes the design as follows: "By 1929 semi-modern tendencies including Art Deco had begun to appear in the city, and although the Drummond Medical Building represents an awareness of new trends and marks an advance over the base-shaft-cornice arrangement of the New Birks Building, Nobbs did not find completely abstract ornament sufficiently articulate to suit his purposes. Even so, the north façade, with its slim central shaft of windows, is a supremely elegant example of streamline composition." *Percy Erskine Nobbs*, 70.

The Architecture of Medical Office Buildings

By 1930 Montreal had an extensive network of hospitals. Raymond Tanghé's 1936 history of the city features a fold-out map showing the system of principal hospitals in Montreal.[17] Maps like these reveal how discussions about the delivery of medical care imagined the city as a territory; general hospitals were no longer philanthropic landmarks, but rather infrastructural service points. Their visibility, of course, did not imply exclusivity: medical care was now delivered in schools, military bases and factories, through testing, health insurance plans, and routine physical examinations, all serviced by emerging scientifically-oriented practitioners. One of these new places was the office building.

Medical office towers developed as a building type within the context of an explosion of interest in tall office buildings that began at the end of the nineteenth century.[18] In other words, the key architectural innovation of the medical arts building was in designing an office tower-skyscraper expressly for medical use. Promoters emphasized the importance of "nobly" presenting the profession. For instance, a 1928 article on a group-practice building in Saint Louis, Missouri states: "patients, whether they realize it or not, are bound to think more of a physician's ability if he practices in surroundings that back him up with an atmosphere of dignity and attractiveness."[19] The medical arts buildings were thus aligned with other important interwar subtypes for skyscrapers related to medicine, such as insurance buildings. The Sun Life Building on Montreal's Dorchester Square, finished in 1931, is a prominent example.[20] With design came medical credibility.

After World War I, tall-building design in North American cities was based on Beaux-Arts derived planning with exterior decoration taken from classical Greek and Roman architecture. In Beaux-Arts schemes such as the 1922 Montreal Medical Arts Building (fig. 2), designed by Montreal-based firm Ross and Macdonald, the building itself was usually divided like a classical column into a tripartite division of base, shaft and capital.[21]

17. Raymond Tanghé, *Montréal* (Montreal: Éditions Albert Lévesque, 1936).
18. On the development of downtown Montreal, see Isabelle Gournay and France Vanlaethem, eds., *Montreal Metropolis 1880-1930* (Montreal: Canadian Centre for Architecture, 1998).
19. [s.n.], "A Suggested Plan for the Medical Suite, Based on a St. Louis Dental Office," *Medical Economics* 1, 6 (1928): 41.
20. See C.A. Marchant, "A Great Canadian Building: The Sun Life Assurance Company's New Premises, Montreal," *Architectural Review* 46 (September 1919): 53-55.
21. See "A Building Exclusively for Medical Men," *Contract Record and Engineering Review* 38, 22 (1924): 556-59. This tripartite division was discussed in an influential article written by innovative Chicago-based architect Louis Sullivan, "Tall Building Artistically Considered," *Lippincott's Magazine* 57 (March 1896): 403-9, reported in Louis H. Sullivan, *Kindergarten Chats and Other Writings* (New York: Dover Publications, 1979). Sullivan

Figure 2. Montreal Medical Arts Building.

Source: Canadian Centre for Architecture.

In that same year, 1922, an international design competition for the Chicago Tribune skyscraper crystallized experimentation with new, self-consciously modern ways of shaping the building.[22] Coupled with new laws dictating how the volumes of tall buildings should be massed to allow light and air within them, tall structures adopted features known generally as Art Deco. Familiar Manhattan examples of this trend in skyscraper design include Raymond Hood's 1933 RCA Building at Rockefeller Center, and the

argued that a three-part division for the external form should come not from classical sources but should rather follow naturally from the functions of the building.

22. Katherine Solomonson, *The Chicago Tribune Competition: Skyscraper Design and Cultural Change in the 1920s* (Chicago: University of Chicago Press, 2003).

Chrysler Building of 1930 with its famous decorative gargoyles.[23] Ross and Macdonald were among the leading architects who built a celebrated group of Art Deco buildings in Montreal, a production that included their Architects' Building (1929-34; now demolished).[24]

The office building, then, was an existing type that doctors and architects self-consciously shaped into a medical one.[25] Whether Beaux Arts or Art Deco, the skyscraper's ornament was readily and easily adapted to medical themes. In Vancouver, McCarter and Nairne's Georgia Medical-Dental building, unfortunately demolished in 1989, had vertically-emphasized, soaring facades and three, eleven-foot tall, terracotta nurses sculpted in World War I uniforms for the setbacks on the tenth floor, which stared out over the city like gargoyles (fig. 3).[26] The Vancouver building featured large decorative panels on either side of the front entrance, depicting the caduceus, the staff of Hermes (or Mercury), showing two serpents entwined around a staff.[27]

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23. On the factors underlying American skyscraper design in this era, see Carol Willis, *Form Follows Finance: Skyscrapers and Skylines in New York and Chicago* (New York: Princeton Architectural Press, 1995).

24. On The Architects' Building, see Sinaiticus, "Architects' Building Montreal," *Construction* 24, 6 (1931): 180-84; [s.n.], "Architects' Building," *Journal - Royal Architectural Institute of Canada* 8, 9 (1931): 325-37; and the discussion in Jacques Lachapelle, "L'américanéité dans l'architecture de Ross et Macdonald," *Society for the Study of Architecture in Canada Bulletin* 22, 2 (1997): 40-46. The history of office space and the rise of the office building as a building type in Montreal has received the most attention in reference to the prolific career of Ross and Macdonald: see Jacques Lachapelle, *Le fantasme métropolitain : l'architecture de Ross et Macdonald : bureaux, magasins et hôtels, 1905-1942* (Montreal: Presses de l'Université de Montréal, 2001). France Vanlaetham discusses the building's plan and elevation on page 109 of "Montreal Architects and the Challenge of Commissions" in Gournay and Vanlaethem, eds., *Montreal Metropolis*, 71-111.

25. Hotels and corporate office buildings sometimes had more than rudimentary medical facilities. See Annmarie Adams, "Modernism and Medicine: The Hospitals of Stevens and Lee, 1916-1932," *Journal of the Society of Architectural Historians* 58, 1 (1999): 54-5.

26. On the demolition, see Arthur Allen, "Requiem for the Medical Dental Building," *Places* 6, 4 (1990): 8-11.

27. Herein lies a mystery, since the standard icon of medical imagery is of a *single* serpent-entwined staff, known as the staff of Asklepios or simply an Asklepian. Robert Wilcox and Emma Whitham show that, by the late nineteenth century in the United States there was a widespread but mistaken appropriation of the caduceus in the representation of medicine. See Robert A. Wilcox and Emma M. Whitham, "The Symbol of Modern Medicine: Why One Snake is More than Two," *Annals of Internal Medicine* 138,8 (2003): 673-77. The mistake is intriguing, because Hermes, who was identified with the lucrative aspects of commerce, was known as an "entirely unethical child," an "ingenious deceiver," the "patron god of thieves, merchants, and travelers," and, finally, "the guide of souls along the pathways to the underworld" (which, note Wilcox and Whitman, would be "a very inappropriate symbol for most physicians, with the possible exception of palliative care specialists," 675-6). In his research on these two different serpent motifs, Walter J. Friedlander found that commercial medical enterprises (including hospitals) displayed a preference for the caduceus, while professional organizations more commonly adopted the

Figure 3. View of a terracotta statue sculpted for the Georgia Medical-Dental Building, Vancouver.

Source: British Columbia Archives.

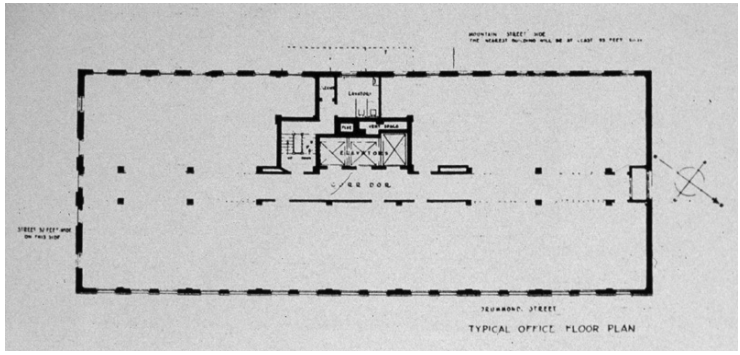
Interior Planning and Technology

The designers of medical arts towers also took advantage of up-to-date building technology. They vaunted structural systems of steel or concrete fireproof frames. Images of the Georgia Medical-Dental Building under construction demonstrate how the building is held up solely by the

Asklepian. See Walter J. Friedlander, *The Golden Wand of Medicine: A History of the Caduceus Symbol in Medicine* (New York: Greenwood Press, 1992). Had the designers of the Vancouver Medical Dental Building intentionally bought into the commercial symbolism associated with Hermes' caduceus? Or had a genuinely mistaken medical symbolism simply been perpetuated in this Canadian building?

reinforced concrete frame. This structural engineering features prominently in a series of photographs now held by the Vancouver Public Library.[28] The walls of these buildings, whether brick or stone, are non-structural, allowing considerable freedom for interior planning. Indeed, the inside of the modern office tower consisted of loft-like, well-lit, multipurpose space—readily partitioned to suit doctors' demands. A typical floor plan of Montreal's Drummond Medical Building showing an entire floor before it is subdivided into individual offices indicates how this basic architectural layout permits partitioning (fig. 4). A considerable amount of energy and interest went into the customized planning and "arrangement" of the offices. Larger group practices might share waiting rooms, nurses, receptionists, and storage space.[29] Surgeries benefited from natural light and occupied higher floors and corner suites, while X-ray services were preferentially housed in the basement or ground floor. The Nobbs archive at the John Bland Canadian Architecture Collection at McGill University contains an unexplained plan, apparently never carried out, for a hospital-like suite of offices on the 7th floor of the Drummond Medical Building, complete with an X-ray department on the 6th floor (fig. 5).[30] Note that the columns visible in the centre of the "before" plan (fig. 4) are neatly incorporated into the corridor walls once the floor is subdivided into offices.

Figure 4. Typical floor plan, Drummond Medical Building.



Source: McGill University, John Bland Canadian Architecture Collection.

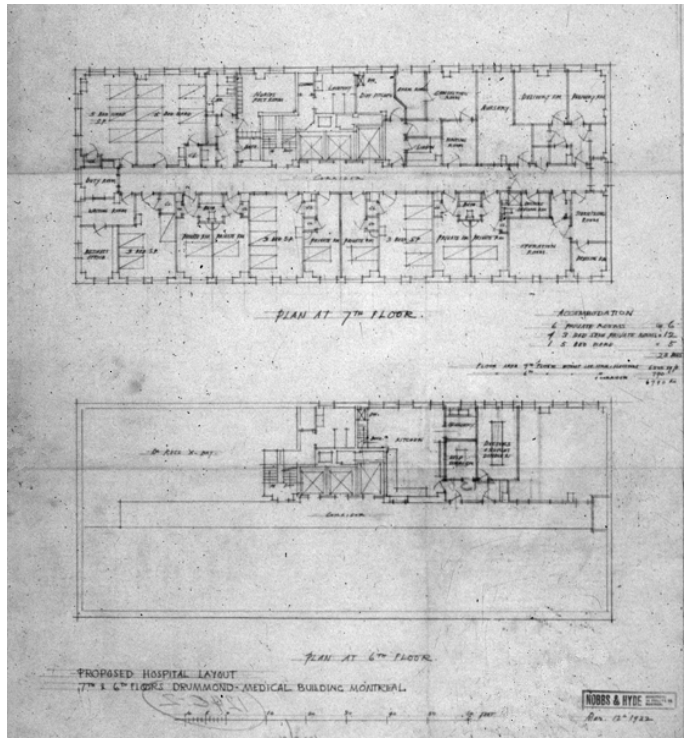
28. The photographs are in the Leonard Frank Collection, Vancouver Public Library, accession numbers 12145 to 12151.

29. The alternatives to group practice promulgated before World War I are examined in Donald L. Madison, "Preserving Individualism in the Organizational Society: 'Cooperation' and American Medical Practice, 1900-1920," *Bulletin of the History of Medicine* 70, 3 (1996): 442-83.

30. The Medical Arts Building had a popular small private hospital, headed by British surgeon Sir Henry Gray.

Examples from the Montreal Medical Arts Building show the variety in office planning skyscraper construction made possible. Dr. Bazin had three consulting rooms and separate entrances from the corridor for patients into the waiting room and for staff into the room marked "office." Dr. Furness had a much simpler two-room corner office on the 5th floor. And finally the plan for Dr. Evans' surgery included three dressing rooms, two operating rooms and a small laboratory.[31] The plans are only sketch proposals and may not have been carried out as indicated. But Lovell's city directories tell us that these three doctors did indeed move into the building shortly after it opened, though Dr. Evans seems not to have had a medical office in Montreal after 1924.

Figure 5. Proposed plan, hospital floors, Drummond Medical Building.



Source: McGill University, John Bland Canadian Architecture Collection.

31. The Archives of Ontario contains plans for the Hamilton Medical Arts Buildings, also designed by Marani and Lawson, showing the same variety of plan types for medical offices. The layout of offices was a popular topic in trade journals. See, for example, Charles M. Harpster, "Some Notes on Practical Offices For the Surgeon With Illustrations," *The Ohio State Medical Journal* 15 (August 1919): 478-80; [s.n.], "A Suggested Plan for the Medical Suite…," 12-13, 40-41; W.F. McCulloch, "Laying Out the Office," *Medical Economics* 6, 7 (1929): 41-47.

The Drummond Medical Building featured new, built-in technology commonly featured in modern office buildings: a central vacuum system, concealed radiators regulated by thermostats, a call-answering telephone service (including the services of a "secretary-operator" who answered calls during the tenant's absence) and three, high-speed micro-leveling elevators, whose doors "open and close by electric control."[32] Many of these devices and systems were meant to provide luxury and status to a new, fee-paying clientele. "Everything possible has been done to put nervous patients at their ease" cooed Sinaiticus in his 1930 architectural review of the building.[33] But in addition, doctors and architects incorporated up-to-date technology borrowed from the explosion of innovation in hospital design.[34] Hospital-like amenities included: acoustic ceilings (visible in the Drummond corridor) meant to control noise both within offices and between offices, and compressed air and gas delivery to each individual office. Overall, there was a drive for a clean appearance in both hospital and doctor's office. That is, the rooms not only had to be easily cleaned, but they had to look like they could be easily cleaned. Operating rooms, like those featured in lighting advertisements, were the model: architects specified vitreous tile, terrazzo floors, curved floor moldings, linoleum, and stainless steel and nickel furnishings.[35]

Linking Medicine and Commerce

A key concept in the office-tower model was the inclusion of ground floor retail and commercial spaces. Including retail was a device borrowed from the modern city office building rather than from the hospital, and required some discretion: architects designed the first floor of Vancouver's Georgia Medical-Dental Building "to accommodate a number of *high-class* stores" (emphasis added).[36] Coffee shops and drug stores were common; though unlabelled in the plan of the Drummond Medical Building at street level—the spaces are generically labeled "store"—the large plate glass windows visible in contemporary photographs clearly indicate commerce behind (fig. 6). The retail spaces connected on the interior to elegant lobbies, decorated with fashionable luxurious materials. Together retail spaces and

32. Sinaiticus, "The Drummond Medical Building," 305.
33. Ibid.
34. On technology in the modern hospital, see Joel D. Howell, "Machines and Medicine: Technology Transforms the American Hospital," in *The American General Hospital: Communities and Social Contexts*, eds. D.E. Long and J. Golden (Ithaca: Cornell University Press, 1989), 109-34.
35. See for example the chapter on "Details of Construction and Finish," in Edward F. Stevens, *The American Hospital of the Twentieth Century*, 3rd ed. (New York: F.W. Dodge, 1928), 493-515.
36. [s.n.], "Medical-Dental Building, Vancouver, B.C., McCarter & Nairne, Architects," *The Journal - Royal Architectural Institute of Canada* 7, 6 (1930): 210.

lobby offered convenient one-stop shopping with a medical twist: customers could do their banking or fill pharmaceutical and optical prescriptions on-site, and the coffee shop offered a comfortable place for patients or those travelling with patients to wait before or during appointments.

The plan of the 1929 Toronto Medical Arts Building, designed by Marani & Lawson, shows a bank, a drug store, an optician, and space for two more stores at street level. This emphasis on retail surely served to attract women patients, like the modern department store that boasted tea rooms and luxurious rest rooms: think Ogilvy's or Chapman and Oxley's contemporaneous designs for Robert Simpson's stores in Toronto and Montreal.[37] The influence of shopping on medical space, though, was uneven; for instance, such retail services did not substantially enter general hospitals until 50 years later.[38]

Figure 6. Drummond Medical building, ground floor plate glass windows and iron entrance canopy.

Source: McGill University, John Bland Canadian Architecture Collection.

37. On women and department stores, see Susan Porter Benson, *Counter Culture: Saleswomen, Managers and Customers in American Department Stores, 1890-1940* (Urbana, IL: University of Illinois Press, 1988). On the intersection of department stores and modern technology, see Angela Carr, "New Building Technology in Canada's Late-Nineteenth Century Department Stores: Handmaiden of Monopoly Capitalism," *SSAC-SEAC Journal* 23, 4 (1998): 124-42.

38. The story of consumerism and healthcare architecture is recounted explicitly in David Charles Sloane and Beverlie Conant Sloane, *Medicine Moves to the Mall* (Baltimore: Johns Hopkins University Press, 2003) and implicitly in S. Verderber and D.J. Fine, *Healthcare Architecture in an Era of Radical Transformation* (New Haven: Yale University Press, 2000).

Making the Medical District

The location of medical arts buildings still corresponds to medical districts today. In turn, medical towers confirmed an urban geography established by the location of earlier urban physician home-offices. As an article in *Medical Economics* puts it, when medical arts buildings arrived in urban situations, doctors were already "clustered together on certain streets."[39] For example, a study by Stacie Burke and Annmarie Adams looked at how turn-of-the-century home offices in Toronto established a medical district near College and University streets that continues today.[40]

The number of physicians located in the Toronto Medical Arts Building doubled between 1930 and 1934 to include almost 20% of the city's doctors. In other words, of 962 physicians advertising in Might's 1934 Toronto City directory, 183 had offices in the Medical Arts Building. The numbers were similar in Winnipeg. In 1928 there were 267 physicians advertising in Henderson's directory; almost 60% of them were clustered in 3 office buildings: 12 % in Boyd Building, 11 % in Somerset Building, and an overwhelming 36% in the six-year-old Medical Arts Building. Our research tracing Montreal doctors' offices through Lovell's city directories shows that practitioners who took offices in the Drummond Building often came from other downtown, non-specialist, office buildings such as the Birks Building on Cathcart Square (perhaps not coincidentally also designed by Percy Nobbs). Still, by 1931, Montreal's first tower for medical professionals, the Medical Arts Building, housed about 100 of the 1200 physicians advertising in the city's directory.

Why did doctors move their offices to centralized locations? Or, more precisely, why did they believe it was desirable to centralize? By 1930 the value of proximity afforded by medical arts buildings was held to be self-evident. Architectural and medical presses abound with articles showing that doctors believed the dedicated office building evolved from the pressures of specialization and the need for consultation with more than one specialist. The result was "the growing realization on the part of professionnal men that it was to their advantage to be located close to one another."[41] Similar discussions were well underway in other professions, too. Ross and Macdonald, the architects of the Montreal Medical Arts Building, promoted a similar attempt to centralize architects' offices in Montreal's Architects'

39. Lee Paschall, "Washington's New Shapes in the Sky," *Medical Economics* 7, 2 (1929): 69.
40. Adams and Burke, "A Doctor in the House," 163-94.
41. Paschall, 30, 69.

Building, which they designed and developed.[42] Such proximity established doctors' offices as commercial enterprises; centralization brought greater competition and simultaneously a potentially greater pool of customers. And again, promoting doctors as entrepreneurs was thought to be an *advantage* of purpose-built towers for medical professionals. Another writer argued: "We as a body of medical men are too shy in discussing the economic phases of our profession, and prone to consider such discussion as beneath our dignity, making possible the fostering upon us of Health Insurances and other similar *curses*."[43] Certainly grouping together made it easier to share equipment. In the entrepreneurial spirit, physicians banded together to afford the expensive technological accoutrements increasingly used in modern medical practice.[44]

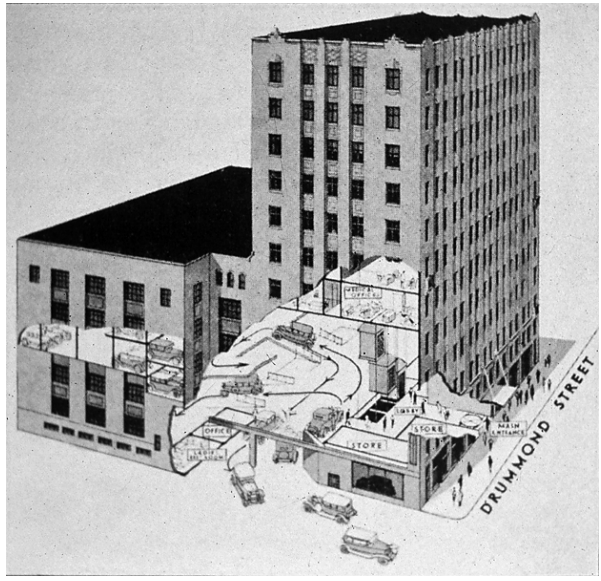
Parking

Above all, the central location of the medical high rise responded to the influence of the automobile. In this sense medical arts towers reacted to the increasing complexity of regulating the growth of urban centres. Indeed, convenient, indoor parking might be the essential element in the success of the medical high-rise. Architects went to great lengths to camouflage these mundane garages. As outlined earlier, the motivation for the Drummond Medical Building's form and construction came from Montreal by-laws, not from physicians' demands. The building features an attached parking garage with elaborate concrete ramps. Nobbs and Hyde disguised the 400 above-ground parking spaces with a bay of medical offices. While doctors often touted the proximity to *public* transportation, towers of power optimally featured accommodation for *private* transportation.[45] When an advertisement showing a cut-away view of the parking ramps at the Drummond Medical Building (fig. 7) appeared in fashion and lifestyle magazine *The Montrealer and Passing Show* in May 1935, the text bragged: "The above cut-away sketch illustrates Montreal's only exclusively medical and dental building. Patients can be seen leaving their cars and stepping into the elevators—effortlessly

42. See Isabelle Gournay, "Gigantism in Downtown Montreal," in Gournay and Vanlaethem, eds., *Montreal Metropolis*, 167-8.
43. Harpster, 478.
44. Donald L. Madison, "Preserving Individualism in the Organizational Society: 'Cooperation' and American Medical Practice, 1900-1920," *Bulletin of the History of Medicine* 70, 3 (1996): 442-83.
45. For the relationship between emerging transportation systems and private medical practice, see Paul Knox, James Bohland, and Neli Larry Shumsky, "The Urban Transition and the Evolution of the Medical Care Delivery System in America," *Social Science and Medicine* 17, 1 (1983): 37-43.

reaching their doctors' offices."[46] The plan called for separate but smooth traffic patterns for pedestrians and automobiles: "A skillfully developed plan of sloping and staggered floors and ramps facilitates inter-floor travel. The traffic at and about the entrance will not be impeded by gasoline sales for all services are provided for upon the floor where there is ample light and no traffic congestion."[47]

Figure 7. Drummond Medical Building, cut-away drawing of parking system.



Source: McGill University, John Bland Canadian Architecture Collection.

In fact the Drummond Medical Building has a prominent place in a slightly different story about the history of technology in Canada, namely the introduction of indoor parking to the modern office building. There were as yet no standard formal or structural solutions for multistory parking garages.[48] Nobbs and Hyde had worked out parking ramp systems in designing a six-floor commercial garage on Cathcart Street, the Royal Garage, also conceived for Henry Birks and Sons.[49] Nobbs and Hyde's

46. [s.n.], *The Montrealer and Passing Show* 9, 5 (1935): 23.
47. Sinaiticus, "The Drummond Medical Building, Montreal," 303.
48. A contemporary article states that the four-storey concrete Central Motor Apartments in Toronto was the "first building of this type to be built in Ontario." [s.n.], "Speedy Erection Characterized Toronto's First Ramp-System Parking Garage," *Contract Record and Engineering Review* 38, 42 (1924): 1029.
49. [s.n.], "Royal Garage, Nobbs & Hyde, Architects," *Construction* 20, 8 (1927): 265.

solution was seen as exemplary.[50] The direct connection between parking and the all-important lobby of the medical high-rise gave these structures a competitive edge over the nearby urban hospital—an institution, as J.T.H. Connor has shown, which was already struggling to accommodate the automobile.[51] The love story between the car and the physician continues today, with the planned McGill University superhospital at one point promising nine levels of indoor parking.[52]

Conclusion

In conclusion, we have argued that when we analyze the design decisions made by architects, we raise unusual questions about the role played by physicians as urban developers and architectural clients. What makes the medical office building distinct is that it is the first large-scale, non-residential healthcare typology. Because medical towers vigorously promoted a commercial rather than a domestic model, they are early but powerfully influential specimens in the slow but startling evolution of medical spaces not intended for rest, recovery, or sleep. The office in the tower was often used as a site of diagnosis rather than healing or treatment. The towers placed a new emphasis on the urban citizen, while simultaneously triangulating a new urban presence for doctors previously etched simply between home and hospital.

Our interdisciplinary approach combines interests in the development and distribution of healthcare facilities. Like Adams and Burke's earlier study of home-offices, the subsequent study uses an approach that is cross-sectional and spatially-defined, with a direct and comprehensive examination of the physicians who opted into clinic-based practice at the specific times each of these buildings opened. The specific socio-economic conditions that led to the formation of medical arts corporations, too, will extend the insights presented here. The relationship between Percy Nobbs and Henry Birks and Sons, on the one hand, seems to be duplicated by the relationship between architect J.C. Atkinson and the promoters of the Winnipeg Medical Arts Building. And, on the other hand, the existence of Montreal's parallel medical communities—one French-speaking, the other English—lends a

50. See for example Owen N.H. Owens, "Incorporating a Parking Garage in the Office Building," *Architectural Forum, Part 2 Architectural Engineering and Business* 52, 6 (1930): 897-902.

51. J.T.H. Connor, "Medical Architecture, Modernism, and the Motor Car," a poster presented at "Form + Function," the 2003 International Network for the History of Hospitals conference, Montreal, Canada.

52. See also the discussion on parking garages for doctors in A. Adams, *Medicine by Design: The Architect and the Modern Hospital, 1893-1943* (Minneapolis: University of Minnesota Press, 2008), 118-19.

particularity to our case study that preliminary studies indicate does not exist in other Canadian urban centres. Other cities exhibited—and, in the case of Toronto, continue to exhibit—much clearer (that is, less bifurcated) geographic centralization.

We should also note here the relationship between the medical arts towers and another concurrent building type, the private patients' pavilion. As the general hospital became the preferred place for delivering healthcare to "patients of moderate means," and indeed to the urban elite, general hospitals commissioned specialized pavilions to house them.[53] Such paying "private" patients—they paid fees both to the hospital and to the attending doctor—were housed in single or sometimes two-bed rooms, as opposed to non-paying "public" patients who were still housed in large, open Nightingale wards, often with as many as 24 beds. English-speaking Montreal had two important such pavilions, the Ross Memorial Pavilion at the Royal Victoria Hospital (architects Stevens and Lee; 1916) and the Private Patients' Pavilion of the Western Division of the Montreal General Hospital (architect J. Cecil McDougall; 1930), while in Toronto the most significant was the private patients' pavilion of the Toronto General Hospital (architects Darling and Pearson; 1930; now demolished).[54] Even though typically they were attached by corridors and tunnels to the main hospital buildings, they had their own diagnostic equipment, nursing staff, and operating suites. And like the towers of power, private patients buildings included richly decorated lobbies, luxurious furnishings, and that all-important attention to access by automobile. The entrepreneur who rented office space for a clinic in medical arts buildings often (though not always) had admitting privileges in the private patients' pavilions: as a result, the new commercial triangle linking home, office and hospital found additional reinforcement in the construction of private patients' pavilions.[55]

In conclusion, we believe it is important to ask further questions about the positioning and role of the medical high-rise. For the medical arts towers arose not just from changes in modern medicine, but also from technological developments in the modern city and in modern architecture. The buildings themselves tell a story that reconnects the history of medical practice to the social history of the interwar city.

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53. On the trend for hospital accommodation for the well-to-do, see Adams, *Medicine by Design*, 35-40; and Gagan and Gagan, *For Patients of Moderate Means.*

54. See, for example, "Ross Pavilion of the Royal Victoria Hospital," *Construction* 10, 6 (1917): 189-95; on Toronto see Sinaiticus, "New Private Patients' Pavilion , Toronto General Hospital," *Construction* 23, 5 (1930): 147-60, and J.T.H. Connor, *Doing Good: The Life of Toronto's General Hospital* (Toronto: University of Toronto Press, 2000), 211-13.

55. We wish to thank an anonymous reviewer for asking us to elaborate on this important point.