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Article abstract

Although the emergence of skyscrapers as a distinctive element in the downtown fabric symbolizes economic change and progress, research questions surrounding their appearance need to go beyond merely noting their height and facade detail. Using case studies in Toronto, Ontario, this paper investigates more useful measures such as floor space, tenancies, and employment levels that have been calculated for several generations of office buildings. The possibilities and limitations of fire insurance atlases, assessment rolls, street directories, and company records are examined. The case studies suggest the interrelatedness of forces at work in shaping office-district landscapes.

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# Looking Inside The Skyscraper: Size and Occupancy of Toronto Office Buildings, 1890-1950

**Gunter Gad**
**and**
**Deryck W. Holdsworth**

*Résumé/Abstract*

*Les gratte-ciel sont devenus un élément distinctif du paysage urbain des centre villes et sont perçus comme symboles de progrès et de transformations économique. Les recherches sur leurs conditions d'implantation doivent cependant aller plus loin qu'une simple description de leur hauteur et de leur facade. S'appuyant sur des exemples de Toronto, en Ontario, les auteurs ont recours à des mesures plus utiles — la superficie de plandier, la location, les niveaux d'emploi — qui ont été calculées pour plusieurs générations d'édifices à bureaux. Les discutent les avantages et les limites des atlas de compagnies d'assurance — incendie, des rôles d'évaluation, des annuaires, et des arelieves d'entreprises. Les exemples étudiés montrent l'interaction des forces qui façonnent le paysage des édifices à bureaux.*

*Although the emergence of skyscrapers as a distinctive element in the downtown fabric symbolizes economic change and progress, research questions surrounding their appearance need to go beyond merely noting their height and facade detail. Using case studies in Toronto, Ontario, this paper investigates more useful measures such as floorspace, tenancies, and employment levels that have been calculated for several generations of office buildings. The possibilities and limitations of fire insurance atlases, assessment rolls, street directories, and company records are examined. The case studies suggest the interrelatedness of forces at work in shaping office-district landscapes.*

## 1. Introduction

The downtowns of a dozen Canadian cities include at least one building constructed between the 1890s and the early 1930s that received the label "skyscraper." Though more recent towers dwarf them in size, and indeed many others in American cities were larger at the time of their construction, this dramatic new element of the urban fabric is an important, but surprisingly neglected, focus for research. Contemporary observers were well aware of these new buildings and their impact on the Canadian city,[1] yet present chroniclers of the emerging metropolis, while including the early skyscrapers in their histories, rarely offer explanations for their genesis, nor do they raise many questions about the role of these structures in the evolving business district.[2] Nevertheless, the relationship between the demand for office space and the emergence of large office buildings can be a fruitful element of enquiry that integrates research on urban and regional economic development, the changing composition of the labour force, and civic attitudes to transportation and land-use planning.[3]

While architectural historians note the emergence of the skyscraper, relatively little is known about those who occupy space in these buildings.[4] By adopting the vantage point of the space-needs of many different kinds of firms we attempt to understand office buildings from the "inside," rather than being seduced by the simple relationship suggested between

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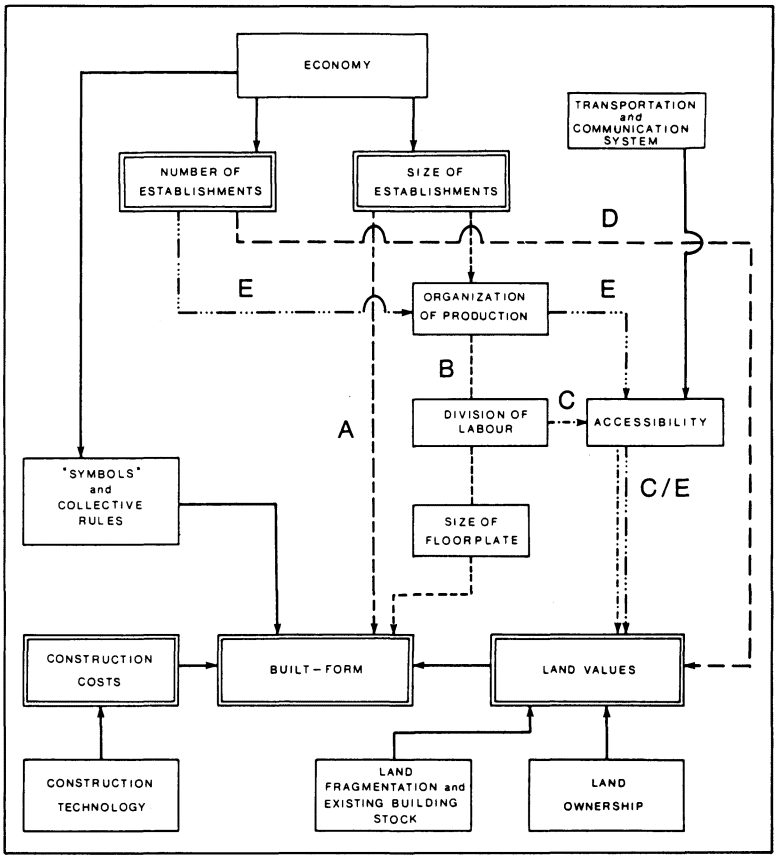



**FIGURE 1.** Built Form and Demand for Office Space.

the size of a building and the company giving it a name. In this paper, we present a conceptual outline of how "demand" relates to built form, and also propose clearer definitions and working rules for the measurement of the size of buildings or for characterizing the firms and people that occupy them, as pre-requisites to a fuller investigation of the complex relationships involved in the emergence of large buildings. The usefulness of familiar data sources are considered and suggestions concerning new sources offered. Here we concentrate on methodological issues; we have explored themes using these rules in a companion paper.[5] Examples are drawn from Toronto, but the problems and possibilities are applicable for other settings.

## 2. Built Form and Demand for Office Space

A broad array of literature has accumulated that attempts to account for the emergence of the skyscraper.[6] Most of the authors approach the explanation of built form from a particular vantage point and thus emphasise particular "forces," events, or circumstances, including the design genius of architects or the architects' discontent with earlier symbolic forms,[7] innovations in building technology,[8] construction costs and land values,[9] municipal by-laws,[10] and outlets for surplus capital.[11] Some commentators attempting to interpret the skyscraper have made reference to the importance of this built form for the conduct of business. Gottman, for instance, answers the question "Why the Skyscraper?"[12] by pointing out the utility of these buildings: since they facilitate proximity of many businesses, they help to reduce transaction costs. Thus the origin of skyscrapers is seen in the context of demand for location and working space. Others have emphasized the dynamics emanating from within the office as well. Duffy, for instance, investigates "internal factors," such as office technology and office organization, in a study of several exemplary buildings constructed over the last hundred years.[13] Duffy realizes that these "internal factors" have to be balanced against "external factors," such as construction costs and real estate practices. Although he fails to offer detailed suggestions on how to deliver such a synthesis, his point is well taken and provides a way out of the jungle of "forces" that has grown on the fertile soil of competing approaches. The basic network of such a synthesis is identified.

In a conceptualization of how internal and external factors relate to each other and shape built form (figure 1), demand or "internal" factors are assumed to be crucial. Demand is shaped by the number and size of office establishments. The size of establishment can translate itself directly into the size of buildings: large organizations presumably need large buildings (figure 1, path A). More

commonly, other factors mediate between the size of establishments and the configuration of built form. The organization of production within these large establishments, and with it the type of labour, influences the amount of space required on one floor (figure 1, path B). For instance, the emergence of large head-office departments with a strong hierachical supervision of the work process would be a factor in shaping large office floors. The presence of a large proportion of low-wage labour in an office establishment would also require a highly accessible location within a city (figure 1, path C). This high degree of accessibility for low-wage labour could only have been provided in the city centre, with its convenience of public transit lines in the period under discussion. Demand for central location also implies an elevation of land values (figure 1, path C). Thus, apart from direct links between size and organization of establishment on the one hand and built form on the other, a number of related links involving locational requirements, the availability of transportation facilities, and land values can be argued.

The schema is further complicated when the number of establishments and their interdependencies are considered. A rapid expansion in the number of establishments without a commensurate expansion of transportation facilities will obviously drive up land values and lead to land-use intensification (figure 1, path D). The more likely impact on built form, however, will stem from the interdependencies between the various office establishments and between them and other units of production and consumption. The amount and nature of linkages maintaining these interdependencies is, of course, conditioned by sectoral relationships as well as the organisation of the production process. Generally, high frequencies of face-to-face linkages would lead to a high demand for proximity and would thus drive up land values (figure 1, path E).

All of these factors could, of course, work in the opposite direction than indicated in the examples cited and cheaper peripheral sites may be preferred by office establishments. Regardless, land values are partially conditioned by demand factors as well as by a number of "external" factors: the nature of the urban transportation and communications system, land ownership, and the character of the existing building stock. For instance, in a Central Business District (CBD) with fragmented land ownership, the existence of an unevenly spaced and fairly new building stock will prevent lot amalgamation; under high demand, the price of lots that can be redeveloped will be driven up and relatively high buildings will be built on them.

Finally, built form is the result of the immediate requirements of users, land values, and construction costs, the latter of which are related to construction technology. Higher buildings are usually more expensive per square foot of floorspace than lower buildings, because of the elaborate building support systems needed. Changes in building technology can alter these cost patterns and thus, in conjunction with other factors, lead to certain building configurations.

Before proceeding, it is important that two other approaches or factors be considered. One persistent objection to the demand assumption is posited on the strength of the belief that high-rise office buildings were made to "impress." While the presence of this motive is acceptable, it can be argued that prestige can also be obtained through elaborate ornamentation, the quality of materials, or the size and style of, for instance, a banking hall. Height undoubtedly *was* part of the prestige game. But the skyscraper stood as a symbol of new economic organization, and built form is used to communicate new social relations.[14] As such it is related to the demands stemming from changes within the economy, rather than being generated by some kind of elusive Freudian force. Of equal importance are the collective rules governing construction and land use, such as building by-laws, height limits or zoning by-laws; these too were shaped within, rather than outside, the economic conditions of urban growth.

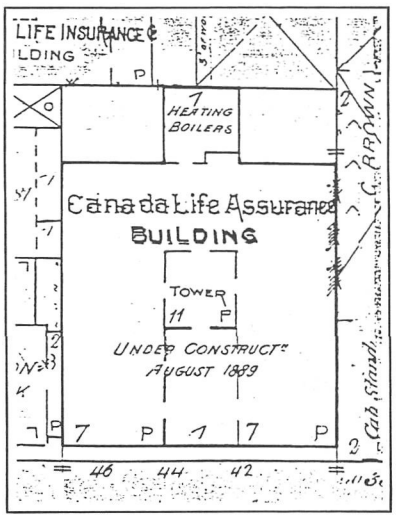
A second objection to the demand approach rests on the argument that high-rise buildings are largely a product of excess capital and/or construction capacity. In such a view high-rise office buildings, like many other products, were propogated by producers without this form being wanted or needed by the users of office space. However, it is hard to imagine such large capital outlays in land and building for something that does not come close to meeting market demand of some sort; and even though in recent decades there have been notorious instances where large surpluses of "patient money" or tax credits resulted in unused buildings,[15] they are not immediately evident in the decades under discussion here.

The conceptual schema incorporates many detailed questions and generates many hypotheses, all concerned with going beyond facade or landscape and "looking inside" the skyscraper instead. Here, as a first step, we are mainly concerned with the basics of the demand issue, which must be addressed before further substantial work can proceed. How do we describe and measure office buildings, the phenomenon to be explained? What do we know about occupancy? How do we measure it and which data sources can we use? In conceptualizing the issue and in collecting information, the limitations of traditional sources are evident. There is a need to seek a variety of contextual but elusive materials; their usefulness are explored below.

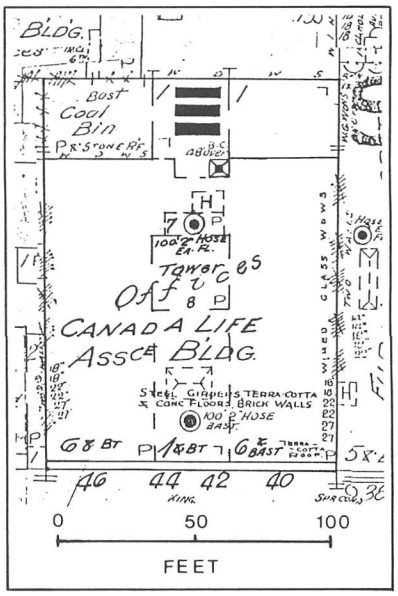
### 3. Measuring Buildings

The traditional way to communicate the height of office buildings is to signal the *number of floors*. For instance, in the period of intensive competition between the developers of tall buildings in Canada, and also between municipalities, "the tallest building in the British Empire" was always mea-

a) Artist's Rendering.




b) Fire Insurance Plan of 1889 (detail).




c) Fire Insurance Plan of 1917 (detail).

**FIGURE 2.** Canada Life Building of 1889-90, King Street West, Toronto.

SOURCES: a) G.M. Adam, *Toronto Old and New* (Toronto: Mail Printing Co., 1891), 197. b) Chas. Goad, Insurance Plan for the City of Toronto, 1880, revised to 1889, Vol. I, Plate 14. c) Chas. Goad, Insurance Plan of the City of Toronto, 1909, revised to 1914-1918, Vol. I, Plate 14 [1917].

sured in terms of the number of floors.[16] Criteria for these height measures, however, were rarely consistent. Floors which were only used for visitor galleries, mechanical equipment, or the apartments of janitors, were incorporated to give the building a boost. In some cases, slim towers contributed several if not many floors to the advertisement of height, but very little of usable floorspace.[17]

A measure that more aptly conveys the functional importance of a building is *total floorspace,* since it indicates a structure's overall capacity to accommodate workers. The *gross* floorspace — derived by measuring the outside dimensions of the building and then multiplying that square footage by the number of floors — is easier to calculate than the *net,* or rentable, floorspace remaining after subtraction of elevators, staircases, light wells and other structural elements.

Ideally the original architectural drawings of a building — together with later plans for additions or major alterations — should be used to measure buildings accurately. However, it is often difficult to persuade companies to search for documents and make them available, and many if not most plan and elevation drawings have been lost.[18] If a building survived relatively unaltered, field study is possible, but equally time-consuming. Instead, systematic work on whole populations or substantial samples of buildings has to rely on standard data sources, such as assessment rolls, city directories, and fire insurance atlases, used in researching the changing city. Assessment rolls usually list all tenants housed within a structure by rooms; thus room numbers can often shed light on the number of floors. Street directories, from at least the 1880s onward, provide room numbers for tenants in the more prominent buildings and from the 1890s onward they list the rooms by floors for the larger office buildings. This was not always done consistently, and for some buildings tenants are listed with no mention of rooms or floors at all. Fire insurance atlases of the 1″ = 50′ series allow the measurement of a buildings' ground floor dimensions and important set-backs on levels above. The number of floors, however, are not always clearly defined, and the size of floors can still vary even if major set-backs are indicated. The problems and possibilities of these data sources can be identified by means of a few exemplary office buildings of the 1890 to 1930 time period.

The Canada Life Building of 1889 (on the north side of King Street West near Bay Street) is an example of the first generation of large office buildings (figure 2). Its height in terms of floors is confusing. The 1892 city directory gives evidence of a basement, a ground floor, five floors numbered

1st to 5th, and a tower floor. The 1928 city directory does not record a basement; it lists the ground floor, "rooms," floors 1 to 6, and no tower floor. While the 1889 fire insurance atlas indicates a seven storey building with set-backs and an 11-storey tower (figure 2b), the 1917 atlas records six floors, a basement and an 8-storey tower (figure 2c). The perspective drawing (figure 2a) provides some resolution of the ambiguities. The floor at grade level is partly below and partly above grade, thus leading some observers to include it as basement and others to regard it as a floor like any other. Since this floor always seemed to be occupied by office establishments, it should be included in the total number of floors. The tower floor is another source of confusion. It is very small; in fact it is so small that it should be excluded from the count of floors. The eleven and eight floors recorded in the tower part of the building by the fire insurance atlases of 1889 and 1917 respectively hint at another problem: these atlases were made to assess the risk of fire — and for the purpose of firefighting the Canada Life Building was eleven or thirteen storeys high! Describing it as an office building, however, we should be content with seven floors.

The fire insurance atlases can be used to calculate the gross-floorspace of the Canada Life Building quite easily, if one keeps in mind that there are two different floorplates (excluding the tower floor): one for the basement and ground floor and another one for the next five floors — for a total floorspace of 73,000 square feet. It can also be seen that the fire insurance atlases do not provide enough detail to measure all those parts of floors, such as elevators and stair wells, which should be subtracted from gross floorspace to arrive at a net value.

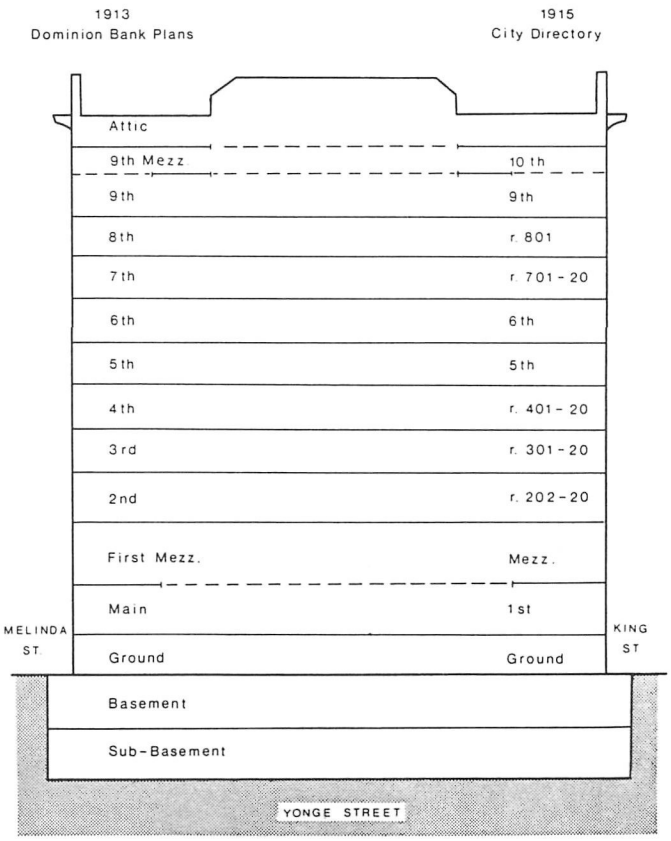
A second generation of large structures, built in the first two decades of the twentieth century to heights of up to twenty storeys and with gross floorspace of up to 200,000 square feet present new problems in trying to establish the number of floors and the amount of office space. The Dominion Bank Building of 1913/14 on the southwest corner of King West and Yonge streets provides a good example (figure 3). The 1917 fire insurance atlas records a 13 storey building with two basements on a ground-floor plan of 73 feet by 165 feet and a light-court above the first floor (figure 3e). In the 1915 city directory, tenants are listed by the following floor headings: Ground, 1st, Mezzanine, and then 2nd to 10th floors, adding up to a total of 12 floors. With two different floor totals, and several different floor numbering systems (figure 3b) calculations of gross floorspace require attention to architectural drawings.[19] Only the "ground," "main" and "mezzanine" floors had full-lot coverage; the upper floors were smaller, modified into a U-shaped floorplate by a 50 feet by 17 feet light-court on the western side (figure 3c). Further subtractions are in order. The mezzanine floor of the opulent main banking hall occupied only about half of the possible floorplate (figure 3d). Likewise, in the Bank's head office premises at the top of the building, the "10th floor" was more properly the mezzanine balcony for the 9th floor, and only two-thirds of the floorspace defined by the outer perimeter was available. The attic floor housed only the janitor's apartment and locker rooms for male and female clerks. The total space above ground level, excluding the attic space, was thus some 133,000 square feet; when two large basement floors are included, the building contained about 166,000 square feet.

The major problem here, and in most of the large bank and trust company buildings from the 1890s onward, is the multi-level banking hall. Fire insurance atlases usually provide a hint regarding the existence and vertical extent of these, by showing, for example, a floor number like "10 = 13." We take this to mean that a building had 10 full office floors, but it had the exterior height of the equivalent of 13 floors.[20] In floorspace calculations, space should be added to that derived from the 10 full floors only if the existence of mezzanines or the use of attics for office purposes can be proven through further data sources.

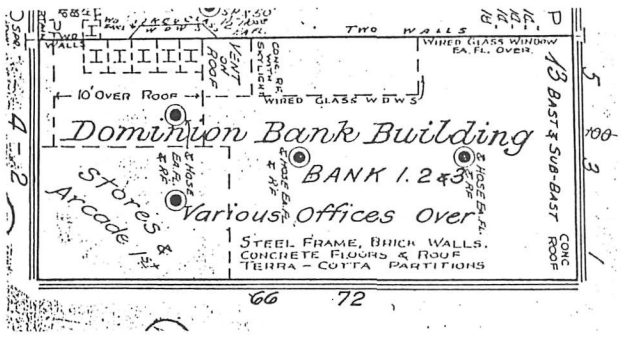
The Dominion Bank Building points to a further dilemma. Of the two basement levels one was used for bank vaults and certain banking functions related to safe-keeping; the second basement was mainly used for building services, especially the heating plant. This knowledge is largely derived from detailed descriptions of the building rather than from directories or fire insurance atlases. Thus for survey-type studies it is generally not possible to determine the nature of below-grade space.

For a third generation of office buildings, typically tapered towers[21] built between the late-1920s and the early-1950s, fire-insurance plans and directories have to be treated even more carefully. The multitude of major and minor setbacks of the perimetre walls and the profusion of floors used for mechanical equipment, galleries — and even to disguise structural components — mean that here more than in the other cases, floorspace rather than height-defined-by-number-of-floors is useful for an assessment of the structure as a component of downtown office stock rather than as landscape icon. The Canadian Bank of Commerce Building, erected between 1929 and 1931 on the southwest corner of King West and Jordan streets, used a seven-storey base and a 27-storey tower for 34 storeys that made it the tallest edifice in the British Empire (figure 4), even though the 32nd to 34th floors were used only for water tanks, machinery, and observation decks.[22] Descriptions of the building are complicated by the fact that the 1954 fire insurance atlas (figure 4b) indicates a multi-storey banking hall, thus the "5 = 7", "6 = 8", and finally "33 = 35" notations, the last contradicting the floor total usually attributed to the structure. The atlas also marks a complex series of set-backs above the 7th, 8th, 9th, 21st, 23rd and 29th floors through dashed lines and a whole array of floor numbers. A detailed study of the floors actually used for office purposes would describe this structure as an office building with 32 floors. Although it provided 450,000 square feet of space, this amount was

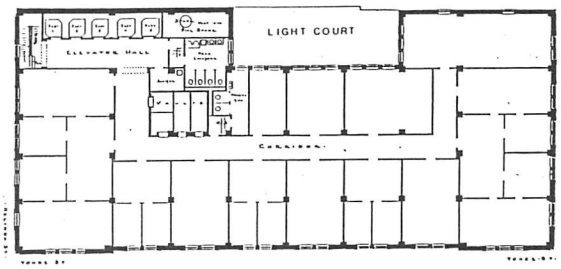
a) Photograph c. 1914. King Street right, Yonge Street left.



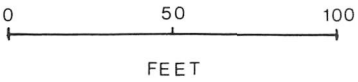

b) Cross-Section, King Street to Melinda Street.

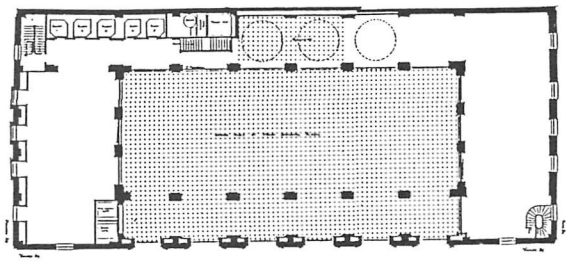



e) Fire Insurance Plan of 1917 (detail).




c) Floor Plan: Upper Floors.



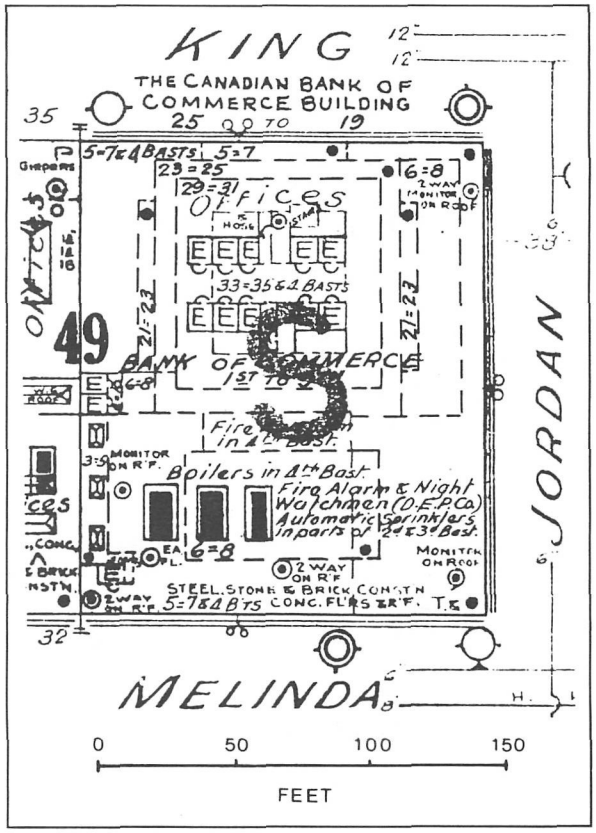



d) Floor Plan: First Mezzanine.

**FIGURE 3.** Dominion Bank Building of 1913-14, King Street West, Toronto.

SOURCES: a) Toronto-Dominion Bank Archives, 77-336-3. b, c and d) see note 19. e) Chas. Goad, Insurance Plan of the City of Toronto, 1909, revised to 1914-1918, Vol. I, Plate 14 [1917].

a) Photo with King Street Facade (right) and Jordan Street Facade (left), photo c. 1935.




b) Fire Insurance Plan 1964 (detail).

**FIGURE 4.** Canadian Bank of Commerce Building of 1929-31, King Street West Toronto.

SOURCES: a) Canadian Imperial Bank of Commerce Archives. b) Underwriters' Survey Bureau, Insurance Plan of the City of Toronto, 1954, partially revised to 1964, Vol. I Plate 14 [1954].

surpassed by the lower (26 storey) 513,000 square feet Bank of Nova Scotia Building (completed in 1951). Here, too, several of the floors were non-functional: the fifth floor, for example, was essentially empty, since it housed the trusses needed to carry the weight of the tower above the large banking hall.[23]

From the above examples, it is evident that there is more to a building's height or size than at first meets the eye. While the influences of technology and fashion change over a century, it is possible to summarize some working rules for the consistent assessment of a building's size in terms of number of floors or amount of floorspace. With regard to number of floors, only full office floors should be included; semi-basement floors with approximately half of the height of the normal window-size above grade level, and mezzanine floors (if their existence can be proven) should be counted. Excluded from the floor count should be mechanical, structural and fully below-grade floors, as well as attic floors used for storage or as janitors' apartments, outlook gallery floors, and various kinds of ornamental floors.[24] When calculating gross floorspace the above rules with regard to floor counts should be applied. Care must be taken, however, to examine the size of each floorplate. If there is any doubt, photographs should be consulted in order to discover and appraise setbacks. When it is not possible to measure the extent of mezzanine floors, as a rule of thumb 50 per cent of a full floor should be used as a measure. The readily available data sources do not allow the determination of net floorspace. Net floorspace can only be determined when time or other circumstances allow for case studies and when detailed floor plans and building descriptions are available.

### 4. Occupancy

The existence of skyscrapers named the Canada Life, Dominion Bank, or Royal Bank Building suggests that these structures were predominantly occupied by the companies

lending their names. However, in most instances, the notion of buildings being wholly or even mainly occupied by the owner or major tenant is misplaced. There is hardly any congruence between firm and building. Even in the case of head offices for large firms there is usually an imperfect fit between the size of the head office organizational unit and the building in which it is housed. The building is nearly always too large or too small, except for short periods of time when there may be an equilibrium. Most typically there are multiple occupants — some with a large staff and many others with a small staff — and for some large firms there is often an overspill of their workforce into other buildings. These trends raise a number of issues about how to conceptualize occupancy of office buildings.

At the outset, it is important to distinguish between the notion of "firm" and the notion of "establishment." Many firms or companies are multi-locational. They may have a head office and several branches. Each of these, if they are at different locations, are treated as separate establishments.[25] In most cases, office buildings have contained many establishments and even more firms. This is because several firms can be administered from one establishment. For instance, in 1914 five companies shared rooms 401-410 of the Traders' Bank Building, according to the city directory. Four of these were mining companies, while the fifth was the stockbroker business of Pellatt and Pellatt. The assessment rolls list Pellatt and Pellatt as tenants, but do not mention the four mining companies. It is quite obvious that these mining companies shared space and administrative staff with the principal tenant of these rooms, but they did not form distinct establishments. Applying this principle one can enumerate 162 companies in Toronto's Royal Bank Building in 1922, but consolidate these to 108 establishments.

**TABLE 1**

**Determination of Establishments: City Directories and Assessment Rolls**

| Year | Building[a] | No. of Establishments[b] | |
|---|---|---|---|
| | | Assessment Rolls | Directories |
| 1891 | Dominion Bank (1879) | 5 | 11 |
| 1891 | Canada Life (1889-90) | 40 | 51 |
| 1907 | Canada Life | 33 | 28 |
| 1907 | Traders Bank (1905-06) | 91 | 94 |
| 1914 | Traders Bank | 99 | 98 |
| 1914 | CPR (1911-13) | 56 | 51 |
| 1927 | Canada Life | 5 | 7 |
| 1927 | Northern Ontario (1924-25) | 88 | 87 |

SOURCES: City of Toronto assessment rolls, 1891 for 1892, 1907 for 1908, 1914 for 1915, and 1927 for 1928; Toronto city directories 1892 (for 1891), 1908 (for 1907), 1915 (for 1914), and 1928 (for 1927).

NOTES: [a]brackets ()s denote construction dates.
[b]excluded are retail outlets, building superintendents' offices and apartments, store rooms for building maintenance staff, etc.

It is not too difficult to determine the number of establishments per building, since both the city directories and the assessment rolls are very reliable sources. Table 1 shows the generally high correspondence in the total number of establishments between these two data sources. Both sources give a detailed room-by-room account, suggesting that care was taken in the compilation. Minor discrepancies can usually be accounted for by the time-lag between the collection of information for the assessment rolls (Spring to Summer) and the up-dating of the city directory (Fall). This time-lag has a special impact, of course, when a new building is in the process of being occupied. Other discrepancies are the result of the difficulties in sorting out which firms should be collapsed into one establishment. Thus, the considerably larger numbers recorded for 1891 by means of the city directories in comparison to the assessment records is due to the inadequate identification of establishments in the city directories. Of the two sources, however, the city directories are the easier to use: the directories are printed while the assessment rolls are hand-written; the directory entries are concisely listed across one or two pages while the entries in the assessment records are spread over many pages and the establishment or firm names are given the same weight as the names of employees and other information. For some small office buildings, however, neither the assessment rolls nor the city directories are of much use, since they do not list occupancy by rooms. In these cases it is very difficult, if not impossible, to determine which firms should be consolidated into establishments.

Since very few buildings had only one occupant, the amount of floorspace occupied by an establishment becomes a research challenge. By treating a building as a set of floors and rooms, occupancy by an establishment can be expressed by number of rooms, or gross floorspace. If establishments occupy fractions of floors, these figures can only be estimates, since room size could vary.

A study of occupancy involving number of rooms and/or amount of floorspace can be used to arrive at quantitative statements of occupancy mix, with attention on the relative weight or size of different "industrial" or sectoral categories. (The many small "service" establishments would numerically dominate a summary, although all these small establishments together were only minor users of office space and contributed in only a minor way to office employment in the central business district.)

Another measure of establishment size, and one that is crucial to our understanding of the development of large office buildings, is employment. The growth in the head office employment of a bank or insurance company, or the increasing number of staff in an advertising agency or law firm, are one of the most important dynamics in shaping office buildings. However, it is extremely difficult to calibrate these changes, due to the paucity of available data. Assessment records include page after page of employee names, and it is

tempting to use this vast amount of data. Not only do the assessment rolls list (until 1936)[26] the names of employees by establishment, but also the marital status of women, broad occupational categories or departmental affiliation, place of residence, and taxable income.

Unfortunately, there are very severe drawbacks in using assessment roll data for construction of employment profiles. The assessment rolls do not list all employees! An individual's taxable income was determined by subtracting exemptions from the total income and this was a complex business. The annual reports of the City of Toronto's assessment commissioner (1905-1936) attest to the permanent issue of exemptions and more generally income determination.[27] The amount of exemptions depended on factors not related to income. Householders could deduct more than non-householders, and after 1920 deductions could be made for children and supported-parents as well. Thus, for instance, a house-owning male clerk earning $1,000 a year could deduct a $1,000 exemption in 1905, while a female clerk, who was not the head of a household but earning the same as the male clerk, could only deduct $400.[28] As a result, the male clerk does not appear in the assessment record, while the female clerk appears with a taxable income of $600.

**TABLE 2**

**Employment Comparisons: Company Staff Lists and Municipal Assessment Rolls**

| Year | Company | Number of Persons: A Company Staff Lists | B Assessment Rolls | B as % of A |
|---|---|---|---|---|
| 1890 | Bank of Toronto, Head Office | 11 | 66 | 54.5 |
| 1890 | Bank of Toronto, Toronto Branch | 30 | 16 | 53.3 |
| 1907 | Dominion Bank, Head Office | 23 | 15 | 65.2 |
| 1907 | Dominion Bank, Toronto Branch | 54 | 25 | 46.3 |
| 1911 | Dominion Bank, Head Office | 30 | 21 | 70.0 |
| 1911 | Dominion Bank, Toronto Branch | 66 | 24 | 36.4 |
| 1912 | Manufacturers Life, Head Office | 89 | 26 | 29.2 |
| 1923 | Bank of Nova Scotia, Head Office | 161 | 58 | 36.0 |

SOURCES: Staff lists in the archives of the Bank of Nova Scotia, Manufacturers Life Insurance Company, and the Toronto Dominion Bank (for details, see footnote 29). City of Toronto assessment rolls 1890 for 1891, 1907 for 1908, 1911 for 1912, and 1923 for 1924.

Assessment records provide an incomplete summary of employment when tested against known personnel records of four large establishments.[29] The percentage of employment totals noted in assessment rolls varies over time and with the type of work or department (Tables 2 and 3). The records account for a greater percentage of head office than branch employment and percentages for both changed markedly over time (Table 2). These changes are most probably a reflection of changing salary structures — and maybe changing gender composition — in different kinds of offices. In the case of the Bank of Nova Scotia head office, the various departments are represented quite differently in the assessment rolls (Table 3). The Stationery Department and "Factory" employees did not appear at all, because they were in a different building in the King/Spadina manufacturing district. Only one of the 17 inspecting officers was listed, no doubt because the others either had low incomes or did not work out of the Toronto head office. And only one in eight employees in the Toronto Premises Department were listed; most were low salary employees such as firemen, elevator men, cleaners, messengers, waitresses, or chauffeurs.

**TABLE 3**

**Employment Comparisons by Department: Bank of Nova Scotia Staff List and Municipal Assessment Rolls, 1923.**

| Department | Number of Persons: A Staff List (31 May, 1923) | B Assessment Rolls (Summer, 1923) | B as % of A |
|---|---|---|---|
| General Managers Office (incl. Branch Superintendants) | 26 | 21 | 80.8 |
| Chief Accountants | 10 | 7 | 70.0 |
| Staff | 7 | 5 | 71.4 |
| Premises | 4 | 1 | 25.0 |
| Inspecting Officers | 17 | 1 | 5.9 |
| Adjustment | 17 | 6 | 35.3 |
| Liability | 5 | 1 | 20.0 |
| Stenographers | 15 | 11 | 73.3 |
| Mail and Switchboard | 17 | 2 | 11.8 |
| Toronto Premises | 24 | 3 | 12.5 |
| Stationery/Factory | 19 | 0 | 0 |
| TOTAL | 161 | 58 | 36.0 |

SOURCES: Staff List, 31 December, 1923, archives of the Bank of Nova Scotia; and City of Toronto assessment rolls, 1923 for 1924.

From this it is clear that not all employees of an organizational unit necessarily worked in the same building and assessment data will not allow statements about the growth of a head office unless there is certainty that this head office was at one address. Further, the data assembled here indicate that the proportion of employees recorded is very likely to vary with the size of an establishment: the larger offices are likely to have a higher percentage of low-paid clerical workers, and only the larger establishments would have their own firemen, chauffeurs, messengers, or dining room staff. To date, no employment records of smaller establishments could be located to estimate the percentage of personnel that would appear in the assessment records.

In spite of these problems the employment data in the assessment rolls is too rich to be dismissed. In the absence of company records it still is the second-best source of infor-

mation to allow a glimpse into the size, structure, and growth dynamics of office establishments. If the system of exemptions is carefully documented, it still allows an impression of the changing gender composition of the office work force, salary levels, and place-of-work-patterns according to income, gender, and marital status. These data can help in assessing the changing characteristics of office establishments and therefore the changing location and space demands, and contributes to an understanding of the changing morphology of buildings.

Since assessment data does not allow the measurement of total employment in office establishments, it is of enormous importance to find reliable company records. However, most of the Toronto companies approached to date do not seem to have preserved personnel records — or the existence of these is not admitted.[30] With the exception of a few case studies, one is therefore forced to rely on the amount of floorspace occupied as a general indication of the size of an establishment.

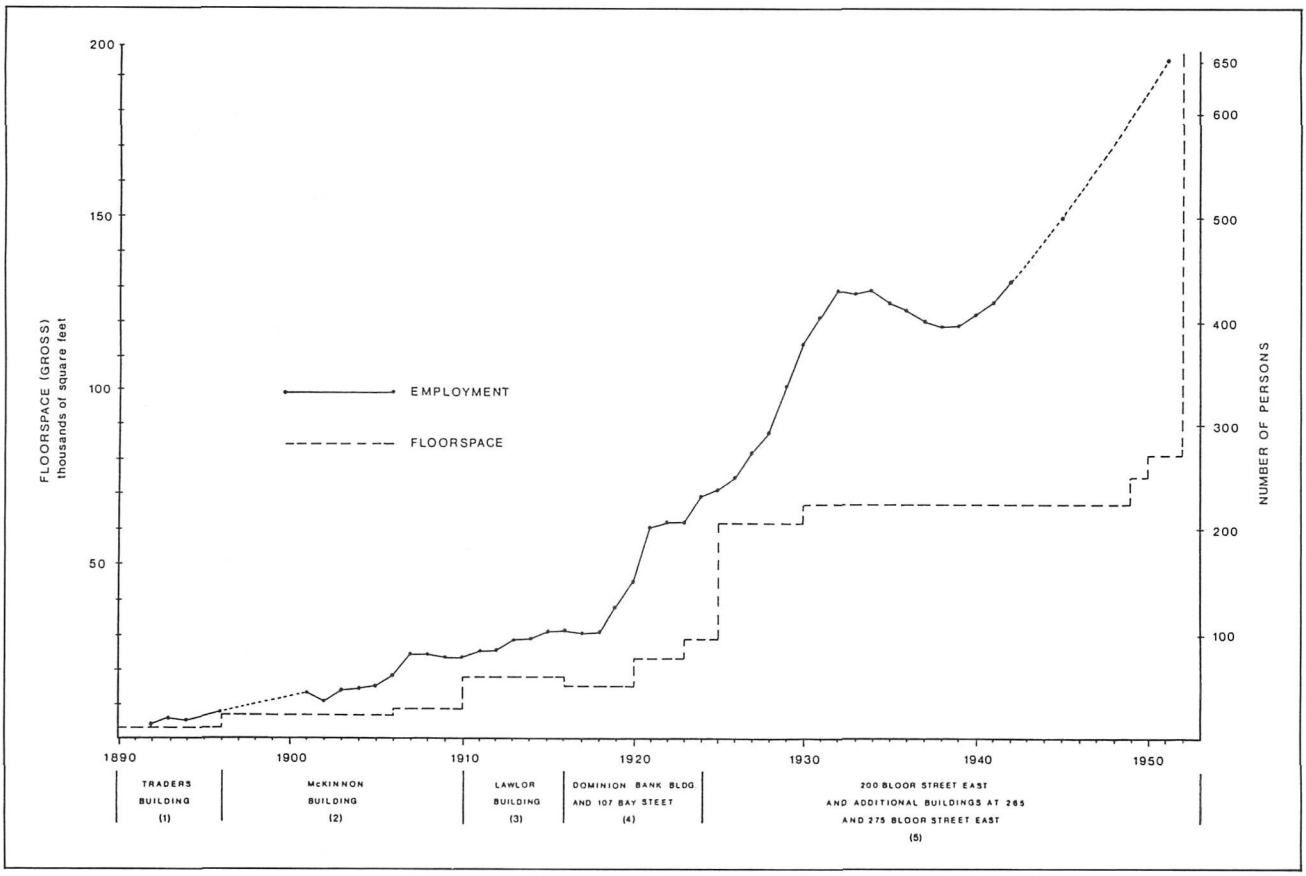
## 5. Matching Organizations and Buildings

The demand for office space was fuelled by a large number of very small establishments with only a handful of employees, and by a few rapidly-growing head offices. The latter, employing hundreds of persons by the 1920s, require special research attention. A focus on individual buildings and their occupancy is inadequate, since space needs and occupied space are rarely balanced. Studying the head office building may miss part of the head office operation if it is fragmented over several locations. Case studies of head offices and head office buildings should therefore be explored.

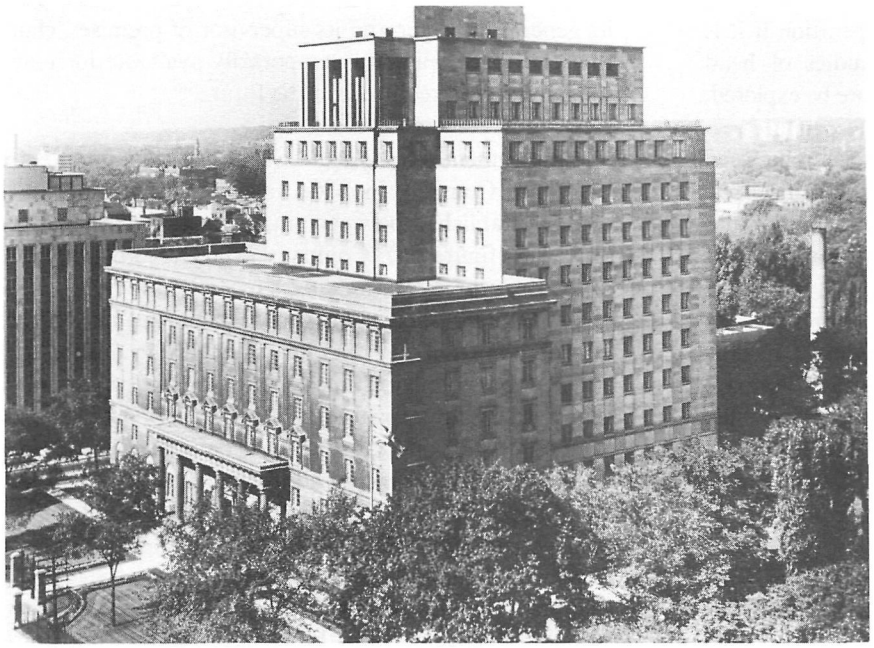
In trying to come to terms with the relationship between building size and the space requirements of such enterprises, several questions seem particularly important. How fast did head offices grow and how were they accommodated? What were the expectations about head office growth, and what building programs did those in charge visualize and bring to fruition? Although city directories and assessment records provide part of the answer, the important sources here are company records. These include corporate histories, staff magazines, biographies of key persons, articles written and interviews given by key personnel, annual reports, the minutes of boards of directors, personnel or salary records, leasing documents, and, if accessible, other company documents related to space needs. Care must be taken, of course when space needs and building programs are discussed explicitly in these documents, since company histories may not be accurate, and different employees and directors may have seen problems in different lights and may have justified actions in retrospect with different motivations. Nevertheless, given some hard data and statements from several different persons involved, it may be possible to achieve some satisfactory interpretations of the building programs leading to large office structures. The head offices of the Canadian Bank of Commerce and the Manufacturers Life Insurance Company are the focus of exploratory studies here.

The construction of the Canadian Bank of Commerce Building, with 32 floors and 450,000 square feet of gross floorspace, reflected the growth of truly national firms, a phenomenon which, in Canada, started in the late nineteenth century.[31] The increase in head office staff is evident in the escalating accommodation requirements. According to the company history of the Bank, by 1912 the 1889/90 head office building had become cramped and insufficient, and a number of departments were housed in rented space elsewhere. Some of the overflow was accommodated from 1916 onward in two buildings adjacent to the head office.[32] The city directories and assessment rolls confirm the pattern of growth: soon after completion of the 1889/90 head office building, the bank shared its "home" with 17 other establishments yet by 1912 the bank seems to have occupied almost the whole seven-floor building, with the exception of a small amount of space leased to a law firm. Apparently the First World War and high construction costs immediately afterwards prevented a new head office building from replacing the "inadequate" old one.[33] Little is known about what happened in the 1920s in the bank's efforts to cope with space problems. The solution, in the form of the 1929/31 building, was a dramatic one. In addition to the nine floors occupied by the bank, the new building contained 23 floors or approximately 130,000 square feet of floorspace that the bank did not need. The space was quickly leased to some 50 different tenants.[34] Spokesmen of the bank, such as its general manager and its supervisor of premises, claimed that the space was only temporarily available for tenants; the bank would require it in the future.[35]

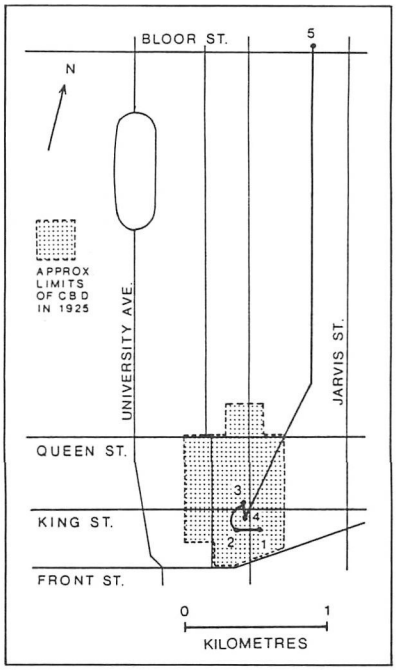
Employment records available for the Manufacturers Life Insurance Company provide an example of the links that can be established between employment growth and space provision (figure 5a). Company salary records are used to graph the year-by-year changes in staff, while the company history, unpublished company documents, and additional information from city directories and fire insurance atlases make it possible to estimate floorspace occupied in each year.[37] It is quite apparent that a continuously expanding head office staff put pressure on accommodation (figure 5a). As the firm grew it increased its space *in situ* or by moving into different buildings in the vicinity of the King and Yonge intersection (figure 5b). In 1916 the company moved into the new Dominion Bank Building (discussed above). Initially Manufacturers Life occupied the entire 5th floor and a small amount of space on the 4th.[38] Under enormous pressure of staff growth, in 1920 the head office expanded on the 4th floor, added rooms on the 2nd, and additional space was rented in a building on Bay Street. In 1923 further rooms were rented on the 2nd and 4th floor of the Dominion Bank Building. However, the firm's response to the massive growth in employment in the late 1920s was not a skyscraper on




a) Head Office Employment and Floorspace, 1890-1952.



c) Head Office Building of 1924-25 (left) and Head Office Addition 1949-52 (right), photo c. 1955.




b) Head Office Locations, 1890-1952.

**FIGURE 5.** Manufacturers Life Insurance Company: Head Office Employment, Floorspace, Locations, and Buildings.

SOURCES: a) See notes 36 and 37. c) Manufacturers Life Insurance Company Archives.

expensive CBD land, but a six-storey building on a large lot in "suburban" (now "mid-town") Toronto at Bloor and Jarvis (figures 5b & 5c), with plenty of space for lateral — rather than vertical — expansion. An eleven storey addition behind the 1925 building was indeed constructed between 1950 and 1952 (figure 5c) and two further lateral expansions took place in the 1960s and 1980s.

The large building projects discussed here were expensive and not undertaken lightly. Those in charge of building programs had to have had expectations of needs based on growth rates or perceptions of growth rates. It is clear from the example of the Canadian Bank of Commerce that some sort of planning took place. The supervisor of premises expected that eventually the 1929/31 tower would be filled by the bank alone, although he did not predict when this would occur.[39] The general manager was more explicit. When asked whether it was the bank's policy to put up buildings with space for lease, S.H. Logan replied that the bank had looked back at accommodation problems and planned ahead for the "next forty or fifty years."[40] The documents of Manufacturers Life reveal that the 1950/52 addition to the 1925 building was planned to accommodate staff growth over twenty years. It was supposed to allow for a staff increase from 600 to 1,500 by building excess space and renting this out initially.[41] Reductions of building programs in the face of adversity lend support to the argument that some sort of forecasting of space needs in connection with personnel growth took place. The Imperial Bank of Canada, for example, planned a twenty-storey head office building in 1930, but reduced growth expectations under the onset of the Depression persuaded the Imperial Bank to down-size its 1933 building to seven floors.[42]

More specific discussions of growth expectations might well come through minutes of boards of directors. Although the responsibility of such boards declined rapidly in the first few decades of the twentieth century, there are strong hints that the boards, or committees of the boards, still took a strong interest in head-office projects.[43] In this context it will be very interesting to find out what role-model New York and Chicago may have played. Large Canadian firms, especially banks and insurance companies, usually had branches in both cities and branch personnel transferred back to Toronto often ended up in influential management positions.[44] Whether any lessons were learned from examples such as the New York-based Metropolitan Life Insurance Company, which was engaged in four head-office building enlargements between 1895 and 1921,[45] remains to be seen. Some of the potential impact of the dynamics in American cities can be exemplified by the case of Manufacturers Life's search for office accommodation in 1906/07. A head office space committee was set up in 1906. Land was acquired at King and Bay Streets, office buildings in Chicago and Detroit were visited, and an architect was hired who recently had designed the Penobscot Building in Detroit. (In 1907, however, the project was abandoned and the site sold).[46]

The Canadian Bank of Commerce and Manufacturers Life generated quite different solutions to their space needs and it can be seen that skyscrapers were not inevitable. Company histories and other easily accessible documents point to the fact that there was considerable latitude as far as the location, size and height of buildings was concerned and that there were various reasons why tall buildings were erected. The general manager of the Canadian Bank of Commerce made his statements about the long-term needs of the bank under the duress of public inquiry;[47] one of the vice-presidents of the bank argued that the large building was inevitable given the value of land in the bank's possession.[48] The general manager's admiration for the monumentality of buildings in New York and real estate economics may have been further elements in the decision to build a prominent tower above the 7-storey cube needed by the bank for its immediate use.

## 5. Conclusions

Interpreting the genesis of the skyscraper and other large-size office buildings in the context of demand pressures requires many data sources. Each of the sources explored here incorporate interesting possibilities but also weaknesses. Almost no source is reasonable by itself; its purpose, its mutability in time, and other features have to be taken into account. The different sources gain strength, however, when they complement each other by either filling in gaps or when one is interpreted in the light of another. A mechanistic use of any one source is doomed to failure; an immersion in time and place suggests itself as appropriate.

The data sources discussed here are not only useful for interpreting office buildings as artifacts in the urban fabric but also for shedding light on a variety of forces associated with Toronto's emergence as Canada's national business centre. The changing occupational structure of the white-collar labour force, commuting patterns, economic diversification as reflected in the central business district, building patterns and CBD morphology, and several other topic areas will be able to benefit from attention to these sources. A thorough knowledge of these related elements of urban history is also necessary, since the office building evolved in a specific network of factors rather than under the influence of a singular force.

**Acknowledgements**
We are grateful for the generous support provided by Barbara Gowans and Colin Smith, archives of the Manufacturers Life Insurance Company; Mildred Pulleyblank, archives of the Toronto Dominion Bank; and Alan Meisner, City of Toronto Archives. Neil Quigley, now with the Department of Economics, Victoria University of Wellington, New Zealand, shared with us information collected in the archives of the Bank of Nova Scotia. Alan Waterhouse, Department of Geography, University of Toronto commented on an earlier draft of this paper. Ken Turner and Steve Jaunzems of Erindale College are thanked for their cartography and photography.

## NOTES

1. For example, J.C. Weaver, *Shaping the Canadian City: Essays on Urban Politics and Policy, 1890-1920* (Toronto: Institute of Public Administration in Canada, 1977), 12-14.
2. G.P. de T. Glazebrook, *A Story of Toronto* (Toronto: University of Toronto Press, 1971) gives the topic one sentence, (198); more recently J.M.S. Careless, *Toronto until 1918* (Toronto: Lorimer, 1984) devotes two paragraphs (136, 175) and four photographs; J.T. Lemon, *Toronto Since 1918* (Toronto: Lorimer, 1985) gives only slightly more attention to the issue (45, 145, 160). Some of the more prominent early office buildings that have now been demolished receive thorough biographical attention from W. Dendy, *Lost Toronto* (Toronto: Oxford, 1978); a comparison volume on extant buildings by Dendy and Kilbourn, *Toronto Observed: Its Architects, Patrons, and History,* (Toronto: Oxford, 1985) is woefully selective about the forces at work in creating large office buildings.
3. An indication of the possibilities is provided in G.H.K. Gad and D.W. Holdsworth, "Building for City, Region, and Nation: Offices in Toronto, 1834-1984," in *Forging a Consensus: Essays on Historical Toronto,* ed. V.L. Russell (Toronto: University of Toronto Press, 1984), 272-321.
4. Most architectural historians seem to do little more than judge the structures as artistic attempts; they tend to give subjective awards for massing and design more than they give information about the buildings' purposes; see, for example, J.C. Marsan, *Montreal in Evolution: Historical Analysis of the Development of Montreal's Architecture and Urban Environment* (Montreal: McGill-Queens, 1981), 228-49; H.D. Kalman and J.D. Roaf, *Exploring Vancouver* (Vancouver: University of British Columbia Press, 1974), 79-124; and P. McHugh, *Toronto Architecture: A City Guide* (Toronto: Mercury, 1985), 85-98.
5. G. Gad and D.W. Holdsworth, "Corporate Capitalism and the Emergence of the High-Rise Office Building," *Urban Geography,* 8 (May-June 1987): 212-231; an earlier exploration is offered in G. Gad and D. Holdsworth, "Large Office Buildings and Their Changing Occupancy, King Street, Toronto, 1880-1950," *Bulletin, Society for the Study of Archiecture in Canada,* 10, 4 (1985): 19-26.
6. We benefited greatly from a thorough review by J. Bonshek, "Reach for the Sky. The Skyscraper: An American Phenomenon" (unpublished M.A. research paper, Department of Geography, University of Toronto, 1978).
7. For example, T. Bender and W.R. Taylor, "Culture and Architecture: Some Aesthetic Tensions in the Shaping of Modern New York City," in *Visions of the Modern City. Essays on History, Art, and Literature,* eds. W. Sharpe and L. Wallcock (New York: 1983), 185-215; W.H. Jordy, *American Buildings and the Architects: Progressive and Academic Ideals at the turn of the Twentieth Century* (New York: Anchor/Doubleday, 1972), 1-179.
8. For example, W. Weisman, "A New View of Skyscraper History," in *The Rise of an American Architecture,* ed. E. Kauffman (London: Pall Mall, 1970), 115-62.
9. For example, G.B. Ford, *Building Height Bulk and Form* (Cambridge, Mass.: Harvard City Planning Studies II, 1931); W.C. Clarke and J.L. Kingston, *The Skyscraper: A Study in the Economic Height of Modern Office Buildings* (New York: American Institute of Steel Construction, 1930). For more recent examples, see I. Hoch, "The Three-Dimensional City: Contained Urban Space," in *The Quality of the Urban Environment. Essays on New Resources in an Urban Age,* ed. H.S. Perloff (Washington: Resources for the Future, 1969), 75-135, especially 75-81; J. Harvey, *The Economics of Real Property* (London: MacMillan, 1981), 87-91.
10. H.W. Corbett, "The Impact of Zoning on New York's Skyline," *American Architect,* 2410 (1923): 1-4.
11. Although writing more generally about monumental architecture, Harvey's arguments could be specifically applied to high-rise office buildings. See D. Harvey, *Social Justice and The City* (London: Arnold, 1973), 270-1.
12. J. Gottman, "Why the Skyscraper?," *Geographical Review,* 56, 2 (1966): 190-212, (especially 201-8).
13. F. Duffy, "Office Buildings and Organizational Change," in *Buildings and Society: Essays on the Social Development of the Built Environment,* ed. A.D. King (London: Routledge Kegan Paul, 1980), 255-282.
14. See, for example, A.D. King, "The Social Production of Building Form: Theory and Research," *Environment and Planning D: Society and Space,* 2 (1984): 429-46.
15. An example of this is the Centrepoint tower in London, England. This highrise office building stood empty for many years during the 1970s. Reputedly, the owner did not waste money, since the peculiarities of tax rules made both construction and the vacant state economical.
16. Although Canadian buildings were overshadowed by the rapid progression in the height of American ones, their locus in the North American economy meant that it was nearly always a Canadian city, be it Montreal, Toronto, or Vancouver, that could claim this title. Only for a few months in 1913 could Sydney, Australia boast the monicker. Height restrictions in London, England prohibited any possible aspirations in the imperial capital. Indeed the Liver Building in Liverpool was the tallest in Britain for decades.
17. A vivid example is the Vancouver *World* (later *Sun*) Building of 1912, which at 17 storeys was seven storeys taller than Toronto's Temple Building; its 84,000 square feet was 15% less than that of the Temple Building however. Data for the *World* building noted in *Vancouver World, Progress and Building Edition,* 6 January 1912, p. 37, courtesy of E.G. Mills.
18. For a discussion of attempts to collect such architectural plans, see Annalise K. Walker, "The Canadian Architectural Archives," *Urban History Review,* XII (February 1984): 63-70.
19. Some of the floor plans are shown in an article on the Dominion Bank Building in *Construction,* 7 (1914): 424, 428-29. Microfilm copies of the original Darling and Pearson drawings as well as printed floor plans in promotional brochures were also consulted. The latter two sources are available in the archives of the Toronto-Dominion Bank.
20. It is interesting to note that the 1916 fire insurance atlas did not provide a hint at the existence of a banking hall in the case of the Dominion Bank Building (figure 4b). This is a reminder that it is prudent to always consider several data sources.
21. On the Chicago Tribune's impact on skyscraper design, see M. Tafuri, "The Disenchanted Mountain: The Skyscraper and the City," in *The American City from the Civil War to the New Deal,* eds. M. Ciucci, F. Dal Co, M. Manieri-Olia, and M. Tafuri (London: Granada, 1980), 390-421.
22. "The New Canadian Bank of Commerce Building, Toronto," *Journal, Royal Architectural Institute of Canada,* 8 (1931): 130-53.
23. A.S. Mather, "The Bank of Nova Scotia," *Journal, Royal Architectural Institute of Canada,* 28 (1951): 317-37.
24. It should be noted, however, that such spaces can change over time: in the Confederation Life Building, a 200-seat Assembly Room on the 7th floor was converted into some 6,000 square feet of office space in 1900; C.R. Dent, *Confederation Life Association: The Story of the Founding and Progress of a Great Canadian Institution,* (n.p., 1939), 143-4. More recent examples include the conversion of the observation decks of Toronto's Commerce Court and Toronto Dominion Centre towers into office space.
25. What are considered as different locations is a somewhat aribitrary decision. Suburban bank branches are clearly separate from head office, yet a ground floor "main city branch" and a head office on the top floors of a building are not. Accommodation on different floors within one building does not constitute a separate location; similarly if different parts of a firm are housed in different yet contiguous buildings, a "head office complex," they are also considered to be one establishment.

26. In 1936 a Provincial income tax was introduced in Ontario and municipalities ceased to collect income information for the purpose of municipal tax collection.
27. The following reports of the City of Toronto Assessment Commission have important discussions on exemptions and other aspects of determination of taxable income: 1905, 1912, 1916-21, 1923, 1924 and 1927. The record of exemptions is probably incomplete and the Ontario Assessment Act and its many amendments must be consulted in order to determine the particular exemption in force during a specific year.
28. City of Toronto, *Report of the Assessment Commissioner,* 1905.
29. These sources are: Bank of Toronto, Yearly Statements, May 1878 to May 1893 (see item "Head Office Department, Expense Account"). Dominion Bank, General Ledger 1896-1911 (see item "General Bonus to Staff"). Both sources are available in the archives of the Toronto-Dominion Bank. Manufacturers Life Insurance Company, "Head Office Salaries 1892-1913," archives of the Manufacturers Life Insurance Company. Bank of Nova Scotia, Staff List, 31 December 1923, archives of the Bank of Nova Scotia.
30. This reluctance may be due to inadequate storage, difficulty of access, or perceived confidentiality of data. The possibilities of using available personnel records are demonstrated by D.G. Coombs, "The Emergence of a White Collar Workforce in Toronto, 1895-1911" (unpublished Ph.D thesis, York University, 1978); and G.S. Lowe, "Class, Job and Gender in the Canadian Office," *Labour/Le Travailleur,* 10 (1982): 11-37. Lowe also addresses the issue of archival reorientation in "The Enormous File: the Evolution of the Modern Office in Early 20th Century Canada," *Archivaria,* 19 (1985): 137-51.
31. Gad and Holdsworth "Building for City, Region, and Nation," 291-301.
32. The space problems of the bank are discussed in V. Ross, *A History of the Canadian Bank of Commerce Volume II* (Toronto: Oxford University Press, 1922), 220, 256, 351, 496, 505, 507-8. A nationwide network of branch banks generated a large volume of paperwork for the head office. By 1912 storage needs led to the construction of a 4 storey archives building two miles to the west of downtown.
33. Ross, *A History,* 496-7.
34. According to the 1933 City Directory there were 54 tenants in the building by the end of 1932.
35. The general manager, Sidney H. Logan, is quoted in A.M. Logan, *From Tent to Tower. The Biography of Sydney H. Logan* (Toronto: Anne M. Logan, 1974), 62-63. The supervisor of premises Duncan Donald expresses his opinion in "The Why and Wherefore of the New H.O. Building" *The Caduceus: Staff Magazine of the Canadian Bank of Commerce,* 11, (1930): 21-22.
36. Employment figures for 1892 to 1942 (always as of January 1st, with the exception of 1892) were obtained from annual lists entitled "head office salaries" (Manufacturers Life archives HA 1620). Temporary staff, hired for December and January, are excluded. Between 1900 and 1910 this temporary component ranged from 7% to 30% of the permanent staff; after 1910 there were only few years when temporary staff were hired and in those instances temporaries accounted for less than 3% of head office staff. The dashed line in figure 5a linking 1896 and 1901 indicates uncertainty as to whether the accident insurance component was included in the head office salary lists for 1897 to 1900. The 1945 and 1951 figures are approximations, culled from various sources such as the company publications "Manu-Script" and "News-Letter."
37. The reconstruction of the floorspace occupied by the Manufacturers Life head office (including the Toronto City Agency until 1916/17) is drawn from several sources. The published company history Manufacturers Life Insurance, *The First Sixty Years. A History of the Manufacturers Life Insurance Company,* (Toronto, 1947) provided some information, as did the collection of typed notes which formed the background to that work (Manufacturers Life archives HA 423). Also useful were the company bulletins "Manu-script" and "News-Letter," and floorplans concerning the 1950/52 addition to the 1925 building.
    These sources were complemented by city directories and measurements from fire insurance maps. All figures indicate above-grade gross floorspace. "Vault space" rented between 1920 and 1925, and the "tea room" rented in 1920 and then acquired by Manufacturers Life are excluded. (These non-office facilities were in buildings other than the Dominion Bank Building and 107 Bay Street that were occupied by head office staff.) Basement space and record storage space attached to the garage of the 1925 building were excluded; the cafeteria, now an integral part of the office building, was included in the floorspace calculations. The 1952 floorspace figure refers only to space occupied by Manufacturers Life.
38. The slight drop in occupied floorspace associated with the move from the Lawlor Building (2 King Street West) to the Dominion Bank Building in 1916 is surprising. Several explanations — or combinations of these — are possible: a) measurement problems, b) move to newer and more efficient space, c) the experience of relatively slow staff growth rates in the years preceeding the move, and d) special conditions during the first two years of the First World War.
39. Donald, "The Why and Wherefore," 22.
40. Logan, *From Tent to Tower,* 62.
41. Manufacturers Life Insurance Co., *And All the Past is Future* (Toronto: Manufacturers Life Insurance Co., n.d. (c. 1963).
42. G. Evans, "The New Head Office Building Imperial Bank of Canada," *Journal of the Canadian Bankers Association,* 43 (1935): 290.
43. The case of the 1925 Manufacturers Life Building is an example. When the "necessity of a new Head Office building became strongly evident" in the late 1910s, the board of directors "referred the problem" to a committee. It was this committee, composed of the president and three directors, that purchased the Bloor Street site and commissioned the architects. There are, however, different instances. It appears that in the case of the Canadian Bank of Commerce Building of 1929-30 the general manager, rather than the board of directors, had a strong influence in the size and design of the building. It was referred to as "Logan's Folly." However, even here, the general manager could not proceed on his own; he had to consult the board of directors; Logan, *From Tent to Tower,* 60-62, 76.
44. Sydney Logan of the Canadian Bank of Commerce is an example. He was the senior agent of the bank in New York from 1923 to 1926. His daughter claims that with her father's background in New York City, his "vision far exceeded everyone else's grasp" when it came to decisions about a new head office building; Logan, *From Tent to Tower,* 51, 60.
45. Data courtesy of Elizabeth McCloat, Librarian of Metropolitan Life Insurance Co. in a letter to the authors, 14 February 1985.
46. The visits of a committee to Detroit and Chicago and the hiring (and de-hiring) of John M. Donaldson (of Donaldson and Meier, architects of Detroit's Penobscot Building) are related in the type-written notes of Mr. L.A. Winter, a long-time executive of the company (Manufacturers Life archives, HA 423, volumes for 1906 and 1907).
47. Logan was questioned by members of the Select Standing Committee on Banking and Commerce in 1934; Logan, *From Tent to Tower,* 62.
48. Sir Thomas White, Vice-President, Canadian Bank of Commerce in a speech at the 1930 Annual General Meeting of the bank; The Canadian Bank of Commerce, *Annual Report 1930* (1931), 42.