Occupational Structure and Ethnicity in London, Ontario, 1871

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Surprisingly little is known of the economic development of late nineteenth-century urban Canada, despite the rapid and extensive proliferation of towns. Although a number of urban studies have been published, few of the older works are well-organized; only rarely do they give more than a passing glance at the economic basis of urban expansion. More recent research has paid closer attention to the economic aspects of urban growth. Two studies have focused on regional urbanization. One concerns urban development in south-central Ontario from first settlement to the 1950s. The second, a pioneer work published ten years ago, reports the results of a study based upon census data attempting to identify and measure the urbanization of manufacturing activity in Ontario and Quebec in the fourth quarter of the nineteenth century.[1] Other studies, published or still in progress, are confined to individual nineteenth-century Ontario towns: Hamilton, Kingston, and Toronto.[2] The study presented here also is confined to a single town, London in south-western Ontario. Its focus is upon the labour force of the town and consists of an analysis of the occupational structure and ethnicity in the city's labour force in a single year, 1871. The micro-data are drawn from the manuscript returns made for the first nation-wide census of Canada in 1871. Some of the detail included in the return was published later in the 1870s,[3] but

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[1] See: J. SPELT, *Urban Development in South-Central Ontario* (Assen, The Netherlands, 1955); E. J. CHAMBERS and G. W. BERTRAM, "Urbanization and Manufacturing in Central Canada, 1870-1890," *Papers on Regional Statistical Studies* (Toronto: Canadian Political Science Association, Conference on Statistics, 1964). For a geographical analysis see: J. M. GILMOUR, *Spatial Evolution of Manufacturing: Southern Ontario 1851-1891* (University of Toronto Press, 1971). For a broader, primarily demographic, survey of urbanization in Canada since the mid-nineteenth century see L. O. STONE, *Urban Development in Canada* (Ottawa, 1967).

[2] F. T. DENTON and P. J. GEORGE, "An Exploratory Statistical Analysis of Some Socio-Economic Characteristics of Families in Hamilton, Ontario 1871," *Histoire sociale-Social History* II, 5 (April, 1970): 16-44. A large-scale project on Hamilton aims at a computerized linkage of every name included in census and tax assessment records, formerly called the "Hamilton Project," now the "Canadian Social History Project"; see M. B. KATZ, "Social Structure in Hamilton, Ontario," in *Nineteenth Century Cities: Essays in the New Urban History*, ed. S. Thernstrom and R. Sennet (New Haven, 1960); A. G. GREEN, "Immigrants in the City: Kingston as revealed in the census manuscripts of 1871," in *To Preserve and Defend: Essays on Kingston in the Nineteenth Century*, ed. G. Tulchinsky, (McGill-Queen's University Press, 1976). P. G. GOHEEN, *Victorian Toronto 1880-1900* (University of Chicago Press, 1970).

[3] All references in this paper (except where otherwise indicated) to (i) the manuscript return are to: Public Archives of Canada, microfilm reel C-608, district 10 only; (ii) the published 1871 census are to: Canada, *Census of 1871*, 5 vols. (Ottawa, 1873-78); and (iii) the 1971 census are to Census Tract Bulletins on London, Statistics Canada items 95-712 and 95-742.

much that is of interest to demographers and to economic historians remained unpublished, largely because of the technical and methodological constraints. In recent years interest has been reawakened in the micro-data available. The study made here represents an addition to the literature now appearing. Two of the published studies similarly focus upon the labour force, both employing sampling techniques.[4] Initially a similar approach was adopted for the present study, and three separate, but identically constructed ten percent samples were drawn from the London data. The results, however, were disappointing. Once "normalizing" procedures were applied not only did the samples suffer considerable shrinkage, the components also lost a number of their characteristics.[5] In short, it was considered that "normalizing" the sampled cases tended to eliminate much of the diversity which inter-urban comparison might wish to elucidate. Hence, for the present study it was decided instead to adopt the more tedious, labour-intensive approach of analyzing the *whole* of the return.

A micro-form copy of the return for London (containing 15,826 "cases") was coded and transcribed, first to punched cards, subsequently to magnetic tape for computer processing. In the original, cases were entered line by line on a twenty-line purpose-printed form divided into columns in which for each person enumerated a number of personal details were recorded. For the present study use has been made only of data on age, birthplace, occupation, and marital status. Reconciliation of the published material available on London and raw data in the manuscript return is not here our concern: a detailed critique of the published 1871 census material is in fact reserved for a separate study. A passing glance is nevertheless merited if only to identify the errors, or discrepancies, in occupational labelling apparently made when translated to published format.

To begin, however, with a more general question: how accurately were the manuscript totals carried into the published tables? Since manual summation at the time was facilitated by the layout of the forms used, it is not surprising that the actual *totals* coincide in the two sources although some of the deletions, alterations, and additions of detail on individual sheets were not always carried to the totals.[6] More interesting is the question of under-enumeration. Unfortunately little can be said of this, the most obvious source of error. An attempt was made to relate census names to those in a contemporary trades directory but without success. However, it should be noted that in some of London's wards, census-taking stretched over a six-week period. Since even for present-

[4] DENTON and GEORGE, *loc. cit.* and GREEN, *loc. cit.*

[5] The "normalizing" procedures adopted for the three London samples were modelled on those employed by Denton and George.

[6] Hence the manuscript yields totals by sex which differ from the published tables.

day censuses undercounting is common,[7] we should assume a high probability that many persons may have been omitted from such a protracted enumeration in the less sophisticated but highly mobile society of 1871 London.[8] More immediately relevant are the observed discrepancies in the data on occupations. First, published occupational tables reveal a ten percent shortage in the number of persons listed in the manuscript with an occupation. Secondly, we should note the omission from the tables of some of the occupations appearing in the manuscript. The manuscript lists 55 young men as "apprentices". No such entry appears in the published table, either because those so classified were excluded from the table or because they were included in a particular industrial occupational group within which they were being trained. The "bookkeepers" in the manuscript were presumably the "accountants" recorded in the published table. These and other similar variations stress the need for caution in the use of published census details for 1871.[9]

The micro-data used here relate only to the city of London. Comparable details for the three suburbs contiguous with the city's boundaries are included in, and form an indistinguishable part of, the return for the surrounding administrative county unit within whose geographical area the city of London is situated. The absence of these data is unfortunate: the three suburbs were clearly an integral part of the local economy. Apart from their impact on the demand in London for goods and services, they represented an extension of the area supplying labour to the city and also, especially the industrialized suburb of east London, offering employment for London's inhabitants.[10] Hence although the recorded population of the city was approximately 16,000, the "greater London" area probably housed about 20,000.[11]

[7] Estimates for recent censuses in Canada indicate "an under-count of 2.5 to 3.0 percent of the population and up to 10 percent in particular sex-age groups." See W. D. KALBACH and W. W. MCVEY, *The Demographic Bases of Canadian Society* (Toronto, 1971), p. 7. Census under-enumeration attracts interest also in an attempt to improve the quality of migration statistics. See, for example, C. H. HAMILTON, "Effects of Census Errors on the Measurement of Net Migration," *Demography*, III (1966): 393-415.

[8] The census of 1871 had as its reference point the 2nd April: enumerators were required to begin their domiciliary visits on 3rd April "or as soon *thereafter as possible*" (italics supplied). It was clearly recognised at the time that the method adopted to compile the first census would not produce an accurate count of the population. CANADA, COMMONS, *Debates, 1871*, col. 1020.

[9] Ambiguities as well as discrepancies are to be noted. The manuscript lists 37 "farmers" (compared with 48 in the published tables). Some were living, perhaps as lodgers, in the homes of differently surnamed craftsmen engaged in non-farm related activities. Others listed as "farmers" in the return are described as "labourers" in a contemporary trades directory. Yet others were of very advanced age and appeared to be resident in the homes of non-farmer sons. In another area, a soda water manufacturer proves to have been only 14 years of age: there may well be other less obvious instances where the label "manufacturer" (of whom there were 56, 5 under the age of 18) was used in the nineteenth century sense to indicate employment in a "manufactory".

[10] "London East" by 1870 housed railway rolling stock workshops, an iron foundry, and a number of oil refineries.

[11] In 1881, when population figures are available for London East and London West, the total for London plus the two suburbs was a little over 25,000. London proper gained about 15 percent between 1871 and 1881 giving credence to the "greater" London estimate of around 20,000 in 1871.

II

Although the year 1871 is dictated by the availability of the basic data, for other reasons it is an appropriate point in time to examine since it approximately coincides with the assumption by the town of a new and enlarged role in the local economy. The growth of London had been extremely rapid during the three decades ending in 1871. The city was incorporated in 1854; by 1871 it housed the diocesan seats for both Anglican and Roman Catholic churches; it had been a garrison town, noticeably so in the 1860s; and was also an assize town.[12] Largely, however, its growth stemmed from its development as a focal point in the railway network and as the economic centre of a rapidly expanding agrarian hinterland.[13] In the 1850s London became linked by railway to Toronto and Hamilton to the east, to Windsor and Sarnia to the southwest and west on the U.S.A. border, and to Port Stanley on Lake Erie to the south. Later additions of branch lines confirmed London as the focal point in the railway network. In this sense London's new economic role offers support for a theory of urban growth based upon transportation: namely that urban expansion in the second half of the nineteenth century was essentially a function of "improvements in communications which served to concentrate economic opportunities in locations which offered the greatest cost advantages in the procurement, processing, and the distribution of goods".[14] Quantitative support is to be found in a study using a value-added approach which shows that the County of Middlesex

[12] For some aspects of the history of London in this period see: ANON., *History of the County of Middlesex, Canada* (Toronto and London, 1889) usually referred to as Goodspeed's [the publisher] *History of Middlesex*; it was reprinted in 1972 with corrections and an index and introductory comment supplied by D. J. Brock. For the early nineteenth century see F. H. ARMSTRONG and D. J. BROCK, "The Rise of London: A Study of Urban Evolution in Nineteenth Century Southwestern Ontario," in *Aspects of Nineteenth-Century Ontario; Essays Presented to James J. Talman*, ed. F. H. Armstrong, H. A. Stevenson, and J. D. Wilson (University of Toronto Press, 1974), p. 80. It is a pleasure also to acknowledge the help received from Mr. Brock in supplying information about London and surrounding areas. As part of the general withdrawal of imperial troops from Canada, London ceased to be a garrison town in 1869. At most the effect of the departure of the military was to reduce the population by 3 percent. Two years earlier, when invasion was feared, British troops in London numbered 2,063. See J. L. HENDERSON, "A Study of the British Garrison in London, Canada West (later Ontario) 1838-1869" (M. A. thesis, University of Windsor, 1967).

[13] Although London's market consisted primarily of the surrounding rural areas, some of its products went further afield. In the 1880s at least three enterprises, which were almost certainly operating in 1871, claimed to be involved in the supply of markets throughout eastern Canada; a fourth firm catered to Ontario as a whole and the North-West Territories. CANADA, *Royal Commission on the relations of labour and capital in Canada*, appointed 1886, reported in 1889, vol. II of minutes of evidence, pp. 610, 666, 670, 675. The local oil refining industry based on Ontario's oil deposits exported more than one-half of its output to Europe. See B. S. SCOTT, "The Economic and Industrial History of the City of London, Canada, from the Building of the First Railway, 1855, to the Present, 1930" (M. A. thesis, University of Western Ontario, 1930), p. 59.

[14] E. E. LAMPARD, "The History of Cities in the Economically Advanced Areas," *Economic Development and Cultural Change*, III (1955), p. 83. The point is made for Ontario towns in G. P. de T. GLAZEBROOK, *A History of Transportation in Canada* (Ryerson Press, Toronto 1938. Reprinted in Carleton Library Edition, 2 vols., Toronto, 1964), I, 170/171 and in SPELT, *op.cit.*, pp. 105 ff.

(dominated by London) had become one of the leading manufacturing centres in eastern Canada by the 1870s, ranking fifth in 1870 and third in 1880.[15]

Not surprisingly the population of London increased very sharply during the "railway" years. From about 2,000 in 1841 the total had jumped to 15,826 by 1871, and, as noted above, to about 20,000 if the three suburbs are included. Population growth on this scale was clearly not solely the product of natural increase. As our subsequent discussion on occupational ethnicity shows, the foreign-born, especially the British-born, predominated in the labour force and generally in the older age groups. A brief comment therefore is merited on the inter-continental migrant in the growth of London. Although in 1871 some 54 percent of Londoners were native Canadian-born, three quarters of them were below the age of twenty, almost 60 percent were under fifteen, and most had foreign-born parents.[16] On the basis of expected rates of natural increase, it is clear that intercontinental arrivals in London had been relatively the heaviest in the 1840s and 1850s. Even in the 1860s, however, arrivals from overseas continued at a significant level: about eight percent of those enumerated in London in 1871 had arrived from Europe during the preceding ten years.[17]

The overwhelming importance of the intercontinental migrant in the peopling of London raises an interesting question: were the foreign-born migrants in the London labour force in 1871 relocating themselves from rural areas in Europe, and hence part of the rural-urban shift of labour typical of the European process of urbanization? The data provide no direct help. However, for three reasons it is suggested that many, but not all, of the foreign-born may in fact have been direct transplants from *urban* areas in Britain.[18] First, it is noticeable that the ethnic profile of London itself differed from the surrounding rural area by containing a significantly higher proportion of foreign-born. Secondly, it seems unlikely that the relatively skilled occupations followed by a large number of London's foreign-born would have been undertaken outside an urban setting, in Britain or in Canada. Finally, it is to be noted that London's foreign-born included a larger proportion of English-born than did other urban areas of Ontario where the Irish and Scottish tended to predominate.

How typical of urban Canada at the time was the nationality mix of 1871 London? In an attempt to relate London in 1871 to its wider Canadian urban context, we have aggregated selected birthplace detail

[15] CHAMBERS and BERTRAM, *loc. cit.*

[16] Only 490 of the 2,673 married male heads of households were Canadian-born, only 289 of them were married to Canadian-born.

[17] About 5 percent had arrived during the five year period ending in 1871.

[18] It should be pointed out that most intercontinental migrants reached south-western Ontario via the U.S.A. at this time (80 percent in the years 1874-77 of whom three-quarters subsequently moved on to final destinations in the U.S.A.). See CANADA PARLIAMENT, HOUSE OF COMMONS, *Sessional Papers*, 1874, No. 9; 1875, No. 40; 1876, No. 8; 1877, No. 8; 1878, No. 9. It is conceivable that some of these may have been active in the U.S.A. farm sector before reaching Canada.

available in published volumes. Because there is no single overall urban total for 1871, only those incorporated centres with 5,000 or more inhabitants have been considered.[19] On this basis nationality has been established for a total of some 385,000. Of these, as many as 72 percent prove to have been native-born.[20] Clearly, London with a ratio of 54 percent of native-born was well below the national average. However, as shown below, it was a characteristic shared by other western Ontario towns at the time. In general, it would seem, first, that towns in eastern Canada were more homogeneous than were towns further west. Secondly, and as might be expected, over time the foreign-born tended to form an ever decreasing proportion of the population as natural increase began to replace inwards migration as the principal determinant of population growth.

Table 1: PERCENTAGE OF URBAN POPULATION BORN IN CANADA
(Selected Urban Centres)
(%)

	1871	*1891*	*1901*
Québec	89	95	96
Montréal	80	83	83
Halifax	80	80	90
St. John (incl. Portland)	75	86	88
Kingston	63	76	81
Toronto	50	65	73
London	54	69	77

[19] M. C. URQUHART and K. A. H. BUCKLEY, eds. *Historical Statistics of Canada* (Cambridge University Press, 1965) give two urban figures: 722,343 as the total, using 1941 definitions, "living in all incorporated cities, towns, and villages, of any size"; a second figure given is 451,370 for residents of incorporated centres of 5,000 persons or more plus an estimated figure of 196,000 living in incorporated centres of 1,000 to 4,999 persons. The 451,370 figure is taken from the comparative table published in the 1881 census which adds in Charlottetown since the province of P.E.I. was not included in the 1871 census. Our total of 385,000 falls short of the 451,370 cited in 1881, partly due to the omission of Charlottetown, partly due to our inability for some small urban centres to separate the relevant data from the county totals.

[20] Professor Green's work on Kingston cited in footnote 2, argues that only 6 percent of urban residents in 1871 Canada were native-born. This would seem to be an underestimate. Green bases his conclusion on a sample of male heads of households in Kingston (and hence perhaps overlooks age differences) and on the assumption that *all* foreign-born were urban residents. He also argues by analogy with the U.S.A. and cites the analysis made many years ago for the U.S.A. by Willcox who showed that large cities on the Atlantic seaboard of the U.S.A. housed a much higher proportion of foreign-born than did the smaller U.S. towns or rural districts and that, in 1900, about two-thirds of the foreign-born in the U.S.A. lived in urban areas. But Willcox also stressed that such distributions were the result of a continuous, steady inward stream of arrivals from overseas and their *temporary* sojourn in the port of first arrival before being diffused across the continent. Moreover, the proportion of foreign-born in the large U.S.A. cities analysed by Willcox was lower than in Kingston or London; it should be noted that Willcox was discussing the 1890s. W. F. WILLCOX, "The Distribution of Immigrants in the United States," *Quarterly Journal of Economics*, XX (1905-06): 523-46.

III

On the evidence of the occupational labels in the manuscript census return it is clear that the economy of 1871 London depended overwhelmingly on males, and more precisely upon foreign-born males.[21] Females accounted for only some 15 percent of the labour force, although they constituted about one-half of the population. Hence it is possible to limit the discusssion of the role of females in the labour force to a few brief words before concentrating upon the male occupational structure. Less than 20 percent of all females aged between fifteen and sixty-four were classified with an occupational label.[22] Most females so recorded were unmarried although only 40 percent of unmarried females are shown with an occupation.[23] Most of the females recorded both with an occupation and as still being married had presumably been deserted by their husbands since they either lived alone or were single parents. Few of the females recorded as widowed seem to have returned to the active labour force. In at least one area, however, the records understate the degree of female participation since about four percent of the unmarried females almost certainly were acting as housekeepers for their widowed father or brother, or for their orphaned siblings. Most of the women (almost 90 percent) recorded with an occupation were engaged in personal or domestic service, about five percent were teachers, about four percent were factory hands or shop assistants. Of the 29 individual occupations recorded for women, 11 were followed by women only.

Males accounted for some 85 percent, and foreign-born males about 60 percent, of the total labour force (foreign-born males and foreign-born females made up 68 percent of the total labour force). Of the male labour force the foreign-born made up 67 percent. The potential male labour force of the fifteen year olds and over numbered 4,957 of whom 4,573 bear an entry in the occupation column.[24] Some 110 of those for whom an

[21] Studies of Hamilton and Kingston in 1871 cited above employing systematic sampling techniques and *confined to male "heads of households" with an occupation* suggest that the native-born in the labour force accounted for some 17 percent and 25 percent respectively of the samples drawn for each city. For London in 1871 the comparable figure for *all* male "heads of households" with an occupation is 18 percent. Restricting the analysis to *heads of households,* however, reveals only part of the picture. For Hamilton in *1861*, apparently, "only about 9 percent of the adult male work force had been born in Canada". HERSHBERG *et al.*, "Occupation and Ethnicity in Five Nineteenth-Century Cities: A Collaborative Enquiry," *Historical Methods Newsletter,* 7 (1974), p. 190. London in 1861 would similarly have been more dependent upon immigrant labour. Sixty percent of the Canadian-born males in London's work force in 1871 would have been below the age of fourteen ten years earlier.

[22] In aggregate terms there appears to have been no scarcity of employment opportunity for females in the 1870s. See the London immigration agent's comments in the annual reports of the Minister of Agriculture in *Sessional Papers*, 1874, No. 9; 1876, No. 8.

[23] A ward by ward comparison of participation rates among unmarried females does not support the view that those wards housing the wealthier members of the community had relatively more non-employed spinsters resident in the parental home.

[24] It should not be overlooked that the occupational labels may be misleading. An unsuccessful attempt was made to reconcile, on a nominal basis, the occupations shown in the manuscript with persons listed in a contemporary trade directory. On the use of different but equivalent occupational titles see: M. B. KATZ, "Occupational Classification in History," *Journal of Interdisciplinary History*, III (1972): 63-88.

entry was made, however, were not *economically* active in that pensioners, "gentlemen of private means," students, and a solitary thirty-six year old Irish "beggar" were included. Discarding these non-active groups we find that 92.1 percent of males fifteen and over were members of the labour force. Incidentally, the comparable figure for London one hundred years later indicates a participation rate of only 81.7 percent.

Is it appropriate, however, to assume for nineteenth-century society that employment did not begin until the age of fifteen? Since compulsory school attendance in Ontario in 1871 legally ended at the age of twelve, it may be more realistic to assume that the labour force included those who were only thirteen.[25] However, the addition of thirteen and fourteen year old boys into our calculations has the effect of *reducing* the labour participation rate to 84.8 percent: the evidence shows that less than 14 percent of boys aged thirteen and fourteen are recorded with an occupation, and that only eleven boys aged thirteen (from a total of 168) had an occupation. Most boys of thirteen and fourteen are in fact shown as being school attenders. Whether this means that an unusually high proportion continued in full-time education or that many combined irregular school attendance with an unrecorded, casual occupation cannot be said. However, two comments may be made. The first is that native-born males, especially those of native-born fathers, were apparently more willing than foreign-born males to prolong their education. It is noticeable moreover that, whether or not recorded as school attenders, native-born under twenty year olds demonstrate a lower labour participation rate than their foreign-born counterparts (age-specific rates are set out in Table 2). It is not possible to say whether or not this reflects an income differential, or different sociological or psychological attitudes among immigrants.

The second comment is to suggest that the absence of under-fifteen year old males from the labour force may accurately reflect contemporary attitude, although the evidence for this hypothesis is in fact drawn from an official report published only in 1889. The compellingly worded testimony of representatives both of employers and of labour given to a royal commission in the 1880s points to a conclusion that, regardless of the availability of educational facilities, and notwithstanding the fact that *many* young persons were members of the labour force, the prevailing belief of both unskilled and skilled labour was that entry into the labour force should not occur below the age of fifteen.[26] The underlying objective appears to have been a desire to restrict the amount of cheap, young

[25] I have to acknowledge here the helpful advice on the history of education in Ontario received from members of the Faculty of Education, University of Western Ontario. For detail on London's educational facilities during the 1860s and 1870s see Goodspeed's *History of Middlesex*, pp. 288-98. The University as well as a medical school and law school were founded in the 1870s and early 1880s.

[26] Canada, *Royal Commission on the relations of labour and capital in Canada*, appointed 1886, reported in 1889. Of the four volumes of evidence, volume II relating to Ontario has been consulted extensively. See, for example, pp. 594-685 generally, and especially pp. 599, 601, 604 (on school attendance), 637, etc. Although the references cited relate to London, similar comments were made in other Ontario towns and also in towns in Quebec (see evidence in volumes III and IV).

adolescent labour available and so reduce competition for employment. Hence, for the same reason, as also reported to the royal commission, wherever labour was strongly enough organized, restrictions were imposed on the number of apprentices to be employed.[27]

Apart from the variations in the labour participation rate between native-born and foreign-born mentioned above, other interesting variations may be noted. There is, for example, a significant variation in the rate for single, married, and widowed males. Less than 2 percent of married males aged between eighteen and sixty-four did not have an occupational label: most of those without a label were at least fifty years old. In contrast 13 percent of unmarried males in the same age group were without an occupation. Some of these single males were foreign-born and resident in hotels, and hence may have been recent arrivals in London at the time of the census. Widowers similarly demonstrate a lower labour participation rate than married men.

Table 2: Labour Force Participation Rates by Age Groups, London, 1871 (%)

Age groups	*All males*	*Native-born males*	*Foreign-born males*
13 and 14	13.8	12.6	17.6
15-17	64.7	61.6	74.6
18 and 19	88.6	86.5	93.0
20-24	94.1	93.2	95.3
25-34	96.1	94.2	97.1
35-44	96.2	93.2	97.0
45-54	94.9	92.2	95.2
55-64	84.0	71.4	84.6
65 +	68.8	50.0	70.0

Our analysis of the male occupational structure is concerned with a total of 157 separate occupations, 11 other occupations followed by women only are here ignored. Although no single occupation predominated (and the majority of occupations in fact employed only a tiny proportion of the labour force) almost one-half of the males of all ages in the labour force were employed in only 10 occupations: three-quarters were covered by only 34 occupations. Except for the labourers, no single occupational label accounted for more than 10 percent of the total. Including the labourer category, eight occupations only individually accounted for more than 2 percent of the labour force. Many of the listed occupations employed only one, two, or three men each: about one-third of the total

[27] It should be noted that evidence given to the 1886 Royal Commission makes clear that the older concept of indentured (or contracted) apprenticeship had to a large extent fallen out of use, partly because of entrepreneurial indifference, partly because of the no longer acceptable implications for personal liberty which accompanied identured apprenticeship. Even in the 1860s, as a letter to the Toronto *Leader* indicates, opportunities for apprenticeship were beginning to dry up. See *Journal of Education*, XXII (1972), p. 39 for a reprint of the letter. I thank Professor D. Lawr, Faculty of Education, U.W.O. for this reference. In 1871 London, only 55 apprentices are listed in the census manuscript: they are omitted from the published tables.

number fall into this category employing, in aggregate, less than 2 percent of the male labour force. Details of the occupational size range are shown in Table 3.

Table 3: PERCENTAGE DISTRIBUTION OF MALE LABOUR FORCE BY SIZE RANGE OF OCCUPATIONS, LONDON, 1871

Number of Occupations (157)	*Individual Share of the Labour Force %*	*Percent of Male Labour Force Employed*
8	≥ 2	44.9
17	1-1.9	22.0
25	0.5-0.9	18.2
107	< 0.5	14.8

Table 4 sets out the leading 34 occupations which in aggregate accounted for three-quarters of the fifteen to sixty-four years olds in the labour force. Students and apprentices, not surprisingly, are to be found in age groups below twenty years; "gentlemen of private means," scarcely found in lower age groups, rank second, third, and fourth, respectively, in those over sixty-four, in the sixty to sixty-fours, and in the fifty to fifty-nines. Beyond such obvious age-related variations two additional points may be made. The first is that the occupation of labourer dominated all ages, occurring in the first three positions in the ranking tables for all age groups. The second point is the tendency for younger age groups to enter commercial occupations or to follow crafts with a relatively high skill component. Older age groups, in contrast, excluding the professions, were heavily concentrated in the hotel industry and in trade on the one hand and, on the other, in the unskilled or low-skilled manual occupations. More than 20 percent of those over forty-nine are classified as labourers, for example, but only 15 percent of those under fifty are so described.

Some comparison is possible for males aged eighteen years and over in London in 1871 and Hamilton in 1861 with the help of a collaborative study of Hamilton and four U.S.A. towns.[28] Table 5 shows that London appeared to have enjoyed a slightly higher degree of occupational concentration than Hamilton.[29] In the former, 34 occupations cover approximately three-quarters of the relevant section of the labour force; in Hamilton the comparable figure is 45. Except for the four leading occupations, the relative rankings of individual occupations vary between the two towns, a reflection of different factor endowment, different economic roles, and possibly also differences in wealth between the two cities. London, for example, in the centre of an oil producing area, housed a number of refiners among its leading occupations: this group is missing from the Hamilton list. The development of London during the 1860s as a marketing and distribution centre is illustrated by the incidence of

[28] HERSHBERG *et al.*, *loc. cit.*, table I.

[29] These differences, Professor Katz informs me, had disappeared by 1871 in Hamilton.

shopkeepers, bookkeepers, hoteliers, and railway employees all of whom were both absolutely and relatively more significant in 1871 London than in 1861 Hamilton.[30] Variations in the respective importance of carriage-making may possibly suggest a wealth differential. London is recorded as having a higher number of light carriages and proportionately more horses in the town than Hamilton although the distribution of "gentlemen" was relatively much the same. Conversely, medical care would seem to have been in greater supply in Hamilton with 21.9 doctors per 10,000 of population compared with 17.6 in London. Spiritual care, on the other hand, calculated on a similar basis was almost identical.

Table 4: OCCUPATIONAL FREQUENCY DISTRIBUTION, LONDON, 1871
(males, fifteen to sixty-four years old)

Occupation Name	*Frequency*	*Percent*	*Cumulative Percent*
Labourer	602	13.6	13.6
Carpenter, Joiner	349	7.9	21.5
Commercial Clerk	335	7.6	29.1
Shoemaker	192	4.3	33.5
Cooper	141	3.2	36.6
Railway Employee	137	3.1	39.7
Blacksmith	129	2.9	42.7
Painter, Glazier	109	2.5	45.1
Merchant	82	1.9	47.0
Tailor	77	1.7	48.7
Engineer	73	1.7	50.4
Carriage Maker	73	1.7	52.0
Printer	70	1.6	53.6
Cabinet Maker	61	1.4	55.0
Manufacturer	54	1.2	56.2
Moulder	52	1.2	57.4
Grocer	51	1.2	58.5
Plasterer	51	1.2	59.7
Articled Apprentice	50	1.1	60.8
Hotel Keeper	49	1.1	61.9
Machinist	47	1.1	63.0
Advocate, Lawyer	47	1.1	64.1
Bookkeeper	47	1.1	65.2
Gentlemen of Private Means	46	1.0	66.2
Bricklayer	45	1.0	67.2
Servant (Male)	44	1.0	68.2
Others (each less than 1 percent)*	321	6.2	74.4

* The remaining eight include: tinsmiths, tanners, shopkeepers, teamsters, stone masons, porters, bakers, and oil refiners.

[30] Railways were under construction west of Toronto during the 1850s and operational during the 1860s. The "railroad worker" of 1861 Hamilton may well have been basically a common labourer in contrast with the "railway employee" of 1871 London who was more likely to have been an operator. It is to be noticed that in Hamilton the railroad worker has been grouped with the labourer in "vertical code five". See HERSHBERG *et al., loc. cit.*, pp. 179 and 187. In London the railway employee has been assigned a slightly higher socio-economic status.

Table 5: Occupational Frequency Distribution in London and Hamilton
(males, eighteen and over)

	London, 1871					*Hamilton, 1861*			
Rank	*Occupation*	*No.*	*%*	*Cumulative %*	*Rank*	*Occupation*	*No.*	*%*	*Cumulative %*
1	Labourer	603	14.3	14.3	1	Labourer	1485	19.8	19.8
2	Carpenter, Joiner	341	8.1	22.4	2	Carpenter	528	7.0	26.8
3	Commercial Clerk	290	6.9	29.3	3	Clerk	303	4.0	30.8
4	Shoemaker	181	4.3	33.6	4	Shoemaker	260	3.5	34.3
5	Railway Employee	139	3.3	36.9	5	Merchant	207	2.7	37.0
6	Cooper	127	3.0	39.9	6	Tailor	205	2.7	39.7
7	Blacksmith	108	2.6	42.5	7	Grocer	150	2.0	41.7
8	Painter, Glazier	96	2.3	44.8	8	Blacksmith	144	1.9	43.6
9	Merchant	87	2.1	46.9	9	Gentleman	121	1.6	45.2
10	Tailor	75	1.8	48.7	10	Tavern Keeper	120	1.6	46.8
11	Engineer	73	1.7	50.4	11	Porter	110	1.5	48.3
12	Carriage Maker	66	1.6	52.0	12	Painter	108	1.5	49.8
13	Gentleman	65	1.5	53.5	13	Cabinetmaker	99	1.3	51.1
14	Printer	60	1.4	54.9	14.5	Attorney	97	1.3	52.4
15	Cabinetmaker	59	1.4	56.3	14.5	Mason	97	1.3	53.7
16	Grocer	53	1.3	57.6	16	Moulder	93	1.2	54.9
17	Manufacturer	51	1.2	58.8	17	Machinist	83	1.1	56.0
18	Moulder	50	1.2	60.0	18	Plasterer	81	1.1	57.1
19	Hotel Keeper	49	1.2	61.2	19	Sailor/Mariner	80	1.1	58.2
20	Plasterer	48	1.1	62.3	20	Engineer	74	1.0	59.2
21	Advocate, Lawyer	46	1.1	63.4	21	Tinsmith	73	1.0	60.2
22.5	Machinist	44	1.0	64.4		Twenty-four others	1127	15.1	75.3
22.5	Bookkeeper	44	1.0	65.4		(each less than 1 percent)			
22.5	Shopkeeper	44	1.0	66.4					
25	Bricklayer	43	1.0	67.4					
26	Tinsmith	41	1.0	68.4					
	Eight others (each less than 1 percent)	299	6.4	74.8					

Source for Hamilton: Hershberg *et al.* "Occupations and Ethnicity in Five Nineteenth Century Cities: A Collaborative Enquiry," *Historical Methods Newsletter*, 7 (1974), p. 176.

Our discussion of occupational structure may be extended, and the possibility of inter-urban comparison increased, by the aggregation of individual occupations into "industrial" groups. This is attempted in Table 6 where nine groups, including one based upon status rather than function, are set out. Allocation between groups is in part intuitive and, as the following qualifying comment attests, is sometimes quite arbitrary.[31] The categorisation is nevertheless useful in providing a manageable illustration of the major areas of activity and their individual importance in the local economy. Government officials, farm workers, hotel and tavern employees, and transport workers (groups 5, 6, 8, and 9) are each reasonably homogeneous. The least important were the farm workers (group 6). The agricultural sector by 1871 was mainly involved in the supply of fruit, dairy products, and horse fodder. Next in ascending order were the government officials (group 5) who included municipal workers, federal post office employees, militia officers, and men described simply as government employees. Hotel keeping and transportation (groups 8 and 9), together help to illustrate London's distribution role. London had 49 hotels in 1871 (one large enough, at the time of the census, to house 107 persons).[32] Less ambiguous are the components of the transportation group employing about 7 percent of the male labour force (3 percent in railway transportation). It also included telegraph operators, road haulage operators, six mariners, and one pilot, the latter presumably operating on Lake Erie. The construction industry group included 654 men labelled with occupations unequivocally concerned with construction: bricklayers, carpenters, painters and other related trades. Also included, however, are approximately 600 men described as labourers (assigned to the group in default of a more obvious alternative) not all of whom were necessarily engaged in the construction industry. Nevertheless, the numerical supremacy of the group is probably an accurate reflection of the pressure of demand on the construction industry at the time. In the decade of the 1860s the population of London had increased by more than one-third, with an annual average increase of more than 3 percent, even taking into account the withdrawal of British garrison troops in 1867. At the time of the census about 100 new houses were under construction.[33] A year earlier, a mental hospital of more than 350 beds was completed in London East. Throughout the decade, in addition, a number of institutions opened new branches or enlarged their existing premises in the city.[34] The trade and services group (group 2), covered the heterogeneous array of service activities common in nineteenth-century society in western

[31] Given inter-temporal and inter-spatial variations in skill requirements it is not surprising that no single acceptable occupational classificatory scheme is available. The absence of an adequate scheme is discussed in KATZ, "Occupational Classification in History."

[32] Group 8 is homogeneous in its coverage of hotels, saloons and bars. Also assigned to the group, however, are *all* the male servants, cooks, ostlers, and the like, some of whom were doubtless employed in private homes.

[33] The existing stock of houses in 1871 is shown in the published census as 2,802 inhabited and 45 uninhabited in volume I and 2,473 in volume III.

[34] For numerous isolated references to the building boom of 1860 see GOODSPEED'S *History of Middlesex*, Chapter XIII, *passim*.

Europe or North America: food retailers, wholesale dealers, the bakers, booksellers, and so on, together with, surprisingly, only one undertaker.[35] Not included are those whose role was concerned with financial institutions. Equally heterogeneous is the aggregation covering manufacturing and crafts (group 3). Included here were occupations of widely differing skills followed either in a custom-made context or in a craft shop or factory.[36] About one-third of the group worked in metal or wood; approximately one-quarter made clothing or footwear; about one-eighth manufactured horse drawn conveyances or the associated harness ware and saddlery; the remaining 30 percent included a wide range of occupations: potters, cigar makers, together with some watch-makers, and a few comparable activities which might equally well have been included with the trade and services group. Two-thirds of the small professional group was made up of lawyers, doctors, ministers, and teachers, about 10 percent were involved in financial mediation, and a further 10 percent are described as artists, authors or musicians. Finally, the commercial group includes bookkeepers (some of whom presumably worked in the banks and loans and savings societies and in manufacturing plants), commercial clerks, commercial travellers, "insurance employees," and two "secretaries".

Table 6: Occupational/Status Groupings in 1871 London
(males fifteen to sixty-four years)

Group	*Recorded Number*	*Per cent of total*
1. Construction industry	1,256	29.0
2. Trade and services (excluding hotel and transportation operators and employees)	487	11.2
3. Manufacturing and craft industries	1,292	29.8
4. Professions	219	5.1
5. Government officials	89	2.0
6. Agricultural workers	58	1.3
7. Commercial sector	416	9.6
8. Hotel and tavern employees	202	4.7
9. Transport workers	312	7.2
	4,331	99.9

We turn now to a more detailed analysis of the male occupational structure to identify occupational ethnicity by birthplace. The relative importance of individual ethnic groups is shown in Table 7. As noted above in the discussion on population growth, the foreign-born predominated in the older age groups resident in 1871 London: they predominated also in the labour force as the tabular detail below attests. Two-thirds of the male labour force were foreign-born; 60 percent were from the United Kingdom, England and Wales supplying the largest group. Previous discussion on population growth also indicated that, notwithstanding the overwhelming importance of the foreign-born in the settlement of London, the Canadian-born by 1871 outnumbered all others. It is probable that

[35] Other undertakers may have been listed under a second occupation they may have followed.

[36] The only persons listed in the return as "factory hands" were eleven females.

1871 represents the numerical peak of foreign-born influence in the economy of London. Thereafter the proportion of Canadian-born in the labour force would have expanded as natural increase replaced inward migration as the major component of population growth, and death and retirement removed many of the foreign-born.

Table 7. BIRTHPLACE OF LONDON'S MALE LABOUR FORCE IN 1871

Birthplace	*Males in the Labour Force* %	*Males in London's Total Population* %
England and Wales	32.0	22.7
Ontario	29.4	51.0
Ireland	17.3	11.0
Scotland	11.0	6.9
U.S.A.	5.1	4.2
Elsewhere in Canada	3.3	3.0
Elsewhere in the world	1.9	1.2

Analysing occupational ethnicity by birthplace conceals some interesting aspects which may be briefly mentioned here. Almost all the Canadian-born and most of the American-born were of British origin.[37] London in 1871, moreover, contained proportionally more of English origin and less of Irish origin than was true for the rest of Ontario at this time. Also concealed is the fact that many of the American-born and some Canadian-born were of African origin. Some 330 persons in 1871 were recorded as of African origin of whom 88 (73 born in the U.S.A., 15 in Ontario) were members of the male work force. Most were engaged in some form of manual occupation: 14 were skilled artisans; 61 filled unskilled or semi-skilled roles (49 being labourers); 12 were barbers, representing three-quarters of the city's barbers; the last was a clergyman, the one American-born cleric listed in the return. Compared with the white male labour force it is clear that non-whites were proportionately over-represented in unskilled and semi-skilled occupations. It might be possible therefore to argue the existence of an industrial colour bar. Most of the non-white females in the labour force, especially the wives and widows, were employed as "washerwomen". However, if we bear in mind that many of the non-white males (and females) with an occupation were also recorded as illiterate, or as only partially literate, an alternative conclusion may be that their occupational status reflected their educational level.

Ethnicity by birthplace in the occupational structure may be demonstrated in a number of ways. Here we concentrate upon the numbers from each ethnic group represented in individual occupations in relation to the size of the ethnic group in the labour force. Data were computed for all ethnic groups. In order to simplify the presentation, however, detailed tables are omitted and our discussion is restricted to the five main

[37] The manuscript return shows that 95 percent of those enumerated gave the U.K. as their origin; 2.7 percent specified other European countries.

groups: Canadian-born, English-born, Irish-born, Scottish-born, and American-born.

For each main ethnic group were identified the leading occupations which in aggregate accounted for between 75 and 80 percent of the group. Approximately 30 occupations for each group sufficed to reach the 75 to 80 percent level. Because of differences between groups, however, the total necessary to cover participation by all five groups proved to be 56, about one-third of the 157 separate occupations followed by males. Three occupations only: carpenter, clerk, and labourer, occupy a similar ranking in all five groups.[38] Except for these three, the relative importance of individual occupations varied, often widely, between groups. Nine occupations only were followed by all ethnic groups and often represent for each group approximately the same relative ranking. Ten occupations were common to four of the groups. Seventeen occupations were common to two or three groups. The remaining twenty occupations were each followed by a single group. The major characteristics of each group are discussed more fully below. Here, for convenience, we outline the second step taken, namely the construction of an index to determine the *extent* of representation by main ethnic groups in the fifty-six leading occupations. In Table 8 a summary of the index is shown to illustrate the relationship between the size of the group and the amount of labour it supplied to these fifty-six occupations. An index number of 1 indicates for that occupation a relationship directly proportional to the size of the ethnic component in the labour force. Positive index numbers between 2 and 5 indicate degrees of over-representation; negative numbers 2 to 5 indicate under-representation with negative 5 in fact attesting that members of the ethnic group in question are missing from the occupation(s).[39]

Table 8. INDEX OF ETHNICITY IN 56 LEADING OCCUPATIONS, LONDON, 1871

Index number	*Canadian-born*	*English-born*	*Scottish-born*	*Irish-born*	*American-born*
		(Number of occupations)			
−5	2	3	4	4	11
−3 & −4	12	4	9	11	4
-2	8	12	8	10	9
1	14	25	18	19	11
2	8	8	7	5	5
3 & 4	7	2	8	3	7
5	5	2	2	4	9

The Canadian-born, amounting to approximately one-third of the labour force were represented in 123 of the total 157 occupations and were to be found in all but two of the 56 leading occupations. One of the miss-

[38] These three occupations held the first three rank positions in the male labour force as a whole and together accounted for almost 30 percent of the total.

[39] To facilitate comparison our index is modelled along the lines of that used by HERSHBERG *et al.*, *loc. cit.*, pp. 196 ff.

ing "occupations" was that of pensioner; the Canadian-born were also under-represented among the "gentlemen of private means". Conversely, and similarly reflecting "the youthfulness" of the Canadian component, the group was heavily over-represented among apprentices. In general, it would seem, the Canadian-born were less active in food retailing, the construction industry, and the less skilled roles in the transportation sector. In the construction industry, the largest single sector, Canadians were relatively scarce except among carpenters, an occupation which ranked second and covered almost 9 percent of the Canadian-born, a higher proportion than for the total labour force or for other leading ethnic groups. Labouring, on the other hand, although placed third, accounted for a significantly lower proportion at some 7½ percent than for other groups: 15 percent for the English, about 27 percent for the Irish, and almost 20 percent for the American-born. Moreover, if we compare by ethnic groups labourers aged between fifteen and twenty-four we see that only 6 percent of the Canadian-born were labourers in contrast with more than 10 percent of those born in the British Isles.

The Canadian-born were more conspicuously active in the city's commercial sector and in some of the professions, a reflection, perhaps, of the greater willingness of the Canadian-born to prolong their education and thus delay their entry into the labour force. Canadians were over-represented among the bookkeepers and clerks with index numbers of 2 and 3 respectively. The occupation of commercial clerk headed the ranking list and accounted for almost 12 percent of Canadians in the labour force. In general, both occupations were heavily dominated by Canadians. Of the 347 commercial clerks 51 percent, and of the 47 bookkeepers more than 42 percent, were Canadian-born. Of the clerks 62 percent were below the age of 26 years, two-thirds being Canadian-born. More interesting perhaps is the involvement of the Canadian-born in the professions — here taken to include "artists and authors," "musicians," and "*litterateurs*," as well as law, medicine, and the church. Among the professions as a whole the Canadians accounted for 40 percent of the total. There were significant differences between individual professions. Two-thirds of London's lawyers and 57 percent of the doctors were Canadian-born. Apart from these, the Canadian-born were noticeably under-represented in the professions. The index number for clergy, for example, was -3, for only 18 percent of London's clergy and only 19 percent of teachers, musicians, and artists were Canadian-born. One explanation for such sharp divergences may be that the recorded figures reflect differences in the adequacy and extent of professional training in Canada. In professions where the appropriate training existed locally, the Canadian-born tended to be relatively numerous. Before the advent of medical and law schools, part of the training for the two professions was commonly provided through the apprenticeship or articled clerk system. The census clearly identifies both medical and law students although formally constituted medical and law schools did not appear in London until a decade later. For the clergy, on the other hand, whose ordination normally proceeded from theological college, facilities in Canada were less readily available. Hence in the 1850s and 1860s, in the

absence of theological colleges, clergy tended to be recruited in Britain.[40] For similar reasons, no doubt, those practising the creative arts tended to be immigrants.

The English-born similarly accounted for about one-third of the labour force and, like the Canadian-born, were widely spread across most activities in the local economy. They were represented in 132 of the 157 recorded occupations and were missing from only three of the leading 56 occupations. The English, apparently, included no pensioners nor were they to be found among the booksellers and cigar-makers, two relatively minor activities. In four occupations only (lawyer, policeman, apprentice, and student) were the English significantly under-represented. In general though, this group was conspicuously distributed in proportion to its numbers. In 80 percent of the 56 leading occupations the index number falls in the range −2 to +2. The comparable figure for the Canadian-born was about 50 percent. The English appear to have preferred involvement in business, retail and wholesale, and in filling skilled jobs in the construction industry. Two-thirds of the town's bricklayers, for example, were English. This occupation, along with gardening and butchering comprised the only activities in which the English were heavily over-represented. Although the English-born were conspicuous among some of the professions in supplying 50 percent of artists and authors, one-third of the bankers and brokers, and all the town's architects, they were relatively scarce in the major professions, contributing only one-third of the total of clergy, lawyers, doctors, and teachers.

Each of the remaining three main ethnic groups was considerably smaller than the Canadian-born or English-born. They may therefore be discussed together. Members of the three groups tended to be concentrated into a narrower range of occupations (87 for the Scottish-born, 94 for the Irish-born, and 64 for the American-born), and their distribution in the 56 leading occupations demonstrates wider variances. Among these smaller groups disproportionally heavy concentrations in certain occupations were noted. The London police force, for example, totalled 19 of whom 15 were Irish-born. The city's labourers were also conspicuously recruited from the Irish-born, labouring ranked first for this group who although numerically smaller than Canadian or English contributed one-third of all labourers. The Irish-born were over-represented also among the city's cabmen and saloon-keepers. In such occupations the predominance of the Irish-born reflects well-known North American stereotypes, that the Irish supplied the "brawn" in the occupational structure. However, it should be noted also that the Irish-born supplied almost one-third of the town's clergy thus outnumbering all other ethnic groups.[41]

[40] One important reason for founding an Anglican theological college in London in 1863 was to provide for the pastoral needs of the expanding Anglican diocese of Huron. A second, and evidently far from unimportant reason for the foundation of Huron College (later to be expanded into a university) lay in the "low church" aspirations held by the diocesan bishop at the time and his dislike of the "high church" products of Trinity College, Toronto. By the 1880s about one half of the Anglican clergy in the diocese had been trained in London.

[41] Only one of the nine Irish-born clergy was a Roman Catholic. The predominance of the Irish-born among the Protestant clergy was only partly (if at all) linked with the low

Less need be said about the Scottish and American-born. The Scots were moderately over-represented among the clergy, mostly Presbyterians, and heavily over-represented in bookselling and tailoring. Like the Canadians they were under-represented among labourers. In general the Scots seem also to have avoided barkeeping, some trades in the construction industry and personal service. The American-born were traced in only 27 of the leading 56 occupations and tended to be heavily over-represented in, and absent from, a larger number of occupations than the other main ethnic groups. They were missing from, or under-represented in, occupations involving personal service, retailing, transportation, the commercial sector and the professions. On the other hand they were over-represented in bartending and saloon-keeping, among students (aged fifteen and over), and gentlemen of private means, and they provided twelve (all negroes) of the town's fifteen barbers.

IV

This discussion of occupational ethnicity has revealed not only some interesting variations between ethnic groups but also the existence of certain well-known stereotypes. Are these stereotypes accurately reflective of ethnic group *and* socio-economic class? Does the evidence offer support for the "conventional impression that ethnicity and class were synonomous in some senses"?[42] To be convincing, the answer largely depends on the accuracy of the original occupational labelling in the census, the reliability and appropriateness of the relative rankings assigned to nineteenth-century occupations, and our translation of these into status. The recent use of auxiliary nineteenth-century evidence on wealth as a basis to establish the socio-economic class of given occupations appears not to eliminate the problem.[43] Partly for this reason, partly to test the conclusions reached by Hershberg and his collaborators (who jointly constructed their own index), we have preferred here to use a modern classificatory scheme. We have adapted the Blishen socio-economic index based on 320 occupations in the 1961 Census of Canada.[44] The results are

church preferences of the Anglican bishop of the time: four of the clergy were Anglicans; the remaining four, Methodists.

[42] HERSHBERG *et al., loc. cit.*, p. 212.

[43] The plausibility of some 1871 occupational labels for London has been questioned in a foregoing footnote. For an attempt to equate wealth and occupation see KATZ, "Occupational Classification in History." See also HERSHBERG *et al., loc. cit.*

[44] See B. R. BLISHEN, "A Socio-Economic Index for Occupations in Canada," *Canadian Review of Sociology and Anthropology*, IV (1967): 41-53. See also his "The Construction and Use of an Occupational Class Scale," *Canadian Journal of Economics and Political Science*, XXIV (1958): 519-31. The Blishen scale consists of a socio-economic index score for each of 320 occupations listed in the 1961 census, employing income and education as the ranking criteria. Here we have simply fitted the 1871 data into the Blishen scale making intuitive adjustments where the nature of an occupation in 1871 was radically different from that of 1961. The attraction for the present study of the Blishen scale was its separation of occupations into a consistent rational classificatory scheme. The scale has been partially collapsed as shown at the foot of Table 9.

shown in Table 9. Largely because of differences in the respective methods of scaling, our results do not coincide with those of Hershberg *et al.* For London in 1871 it would seem that although *occupations* may have differed widely between ethnic groups, the distribution by socio-economic class was remarkably alike for all ethnic groups. Irish birth did not, *ipso facto*, apparently mean a significantly lower social standing than that enjoyed by members of two of the remaining four ethnic groups. Moreover, if socio-economic classes IV and V as defined in the Blishen index are aggregated, the proportions are identical for all ethnic groups other than the Scottish-born. The American-born (who included most of the non-whites in the labour force) interestingly display a higher proportion in the top class. Non-whites as a group in London, including American-born and Ontario-born, again in contrast with the Hershberg results, were concentrated in low or unskilled occupations: in Hamilton, Ontario, non-whites would appear to have enjoyed a distinctly higher social standing.

Table 9. Socio-Economic Classes by Ethnic Group, London, 1871

	Percentage of ethnic group in class:				
	I	II	III	IV	V
Canadian born	6.9	2.1	13.9	35.1	42.0
English born	7.6	2.8	11.5	29.8	48.2
Scottish born	6.8	2.9	15.9	31.6	42.6
Irish born	6.3	2.5	13.1	26.1	51.9
American born	9.7	2.9	9.3	30.1	47.9

[Occupations on the Blishen scale have been grouped as follows:
class I , occupations numbered 60.00 or higher
class II , " " 50.00-59.99
class III, " " 40.00-49.99
class IV, " " 30.00-39.99
class V , " " below 30.00]
(The Blishen scale is described in footnote 44.)

Finally we offer the briefest of comments on an area of considerable interest: social mobility in a new and expanding society. By itself, the 1871 manuscript census is inadequate to form the basis of systematic analysis; it is to be hoped that later manuscript returns will become available to facilitate such an analysis over time. All that was possible with the limited data available was to determine the father-son relationship of occupation and socio-economic status. To what extent, that is to say, was the occupation and socio-economic status of the father replicated by working sons still resident in the parental home? A test was made for social mobility using the Blishen scale employed in constructing Table 9 and census data for comparability of occupations. Details were computed for approximately 3,000 families. Of the total of about 1,200 "sons," that is to say of males bearing the family head's surname and having an appropriate age relationship to the family head, about 250 only appear to have achieved some upward mobility in socio-economic status, none appeared to have declined. The overwhelming impression derived from

this test was that the majority of "sons" followed the identical, or closely related occupation of their fathers.

The research results reported here are based upon a time-consuming transcription of the complete manuscript return for the 1871 census of London. Although simpler to use, for reasons already given, sampling techniques yield unsatisfactory results in concealing much of the variety that is important and of interest. This became abundantly clear during the course of the present research although the analysis here is confined to the occupational structure and ethnicity of a relatively small town. London by 1871 was, nevertheless, the fourth largest town in Ontario. Its rate of population growth during the 30 years ending in 1871 had been exceeded only by that of Ottawa. Detailed analysis has illustrated both the overwhelming dependence of the labour force on males born in the British Isles and the relatively unspecialised nature of the economy of 1871 London. However, the results also support the contention that the coming of the railway tended to promote the expansion of towns such as London strategically located on the new transportation network. The rail link with Port Stanley on Lake Erie, for example, quickly eliminated the teamsters who had hauled over the plank road and in general gave easier access to inputs for industry in London.[45] If London's ethnic profile was indeed truly representative of towns on the "frontier" of new settlement, the research results also suggest that new urban expansion may have essentially been a product of inter-urban rather than of rural-urban shifts of population. Data assembled during the present research (although not included here) attest to the scope for detailed research using the manuscript return. A companion article now in progress is aimed at an analysis of the family structure in London.

[45] See T. T. McC. FERRIS, "History of the London and Port Stanley Railway, 1852-1946" (M. A. thesis, University of Western Ontario, 1946), p. 75.