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Mass transiency remains the most striking and consistent finding to emerge from quantitative studies of Victorian North America. In almost every place where historians have looked at least half, often two thirds, of the adults present at one end of a decade had left ten years later, and rates based on shorter periods reveal a stream of people constantly flowing through nineteenth-century cities. Although 363,000 people lived in Boston in 1880 and 448,000 in 1890, during the decade about one and one-half million people actually had dwelled within the city.[1] When Victorians sought a symbol of progress, they often chose the steam engine; had they wanted a metaphor for their cities, they could have found none more apt than the railroad station.

In this paper we confront the question of transiency. Using the New York State Census of 1855 for the entire city of Buffalo and a 10 percent sample of household heads in rural Erie County, we attempt a method of estimating persistence (the proportion of the population remaining in a given place) that is different

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1   Stephan Thernstrom and Peter R. Knights, "Men in Motion: Some Data and Speculations about Urban Population Mobility in Nineteenth-Century America," *Journal of Interdisciplinary History*, I (1970), 18–19. For other studies that reveal the same phenomenon see James C. Malin, "The Turnover of Farm Population in Kansas," *Kansas Historical Quarterly*, IV (1935), 339–372; Howard Chudacoff, *Mobile Americans: Residential and Social Mobility in Omaha, 1880–1920* (New York, 1972); David Gagan and Herbert Mays, "Historical Demography and Canadian Social History: Families and Land in Peel County, Ontario," *The Canadian Historial Review*, LIV (1973), 35–45; Michael B. Katz, *The People of Hamilton, Canada West: Family and Class in a Mid-Nineteenth Century City* (Cambridge, Mass., 1975), 111–134. Two useful reviews of relevant contemporary literature are T. H. Hollingsworth, "Historical Studies of Migration," *Annales de Demographie Historique 1970* (Paris, 1970), 87–96; James W. Simmons, "Changing Residence in the City: A Review of Intraurban Mobility," *The Geographical Review*, LVIII (1968), 622–651.

from that used by most historians. Given the richness of the census, we are able to inquire with great detail into the factors that determined length of residence in a nineteenth-century city and its surrounding countryside.

The rate of nineteenth-century population persistence, Thernstrom has observed, apparently varied little from place to place or with economic conditions. He finds most striking not the differences in the rates of persistence reported by historians but their general similarity.[2] Given the impossibility of making precise comparisons among the studies upon which he comments, Thernstrom has drawn the most reasonable conclusion from their findings, for all of the historical studies rest on record-linkage, that is, the attempt to trace individuals from one source to another. Record-linkage is an intricate, hazardous undertaking, and different methods can radically alter the number of people located on two different sources. It is the historian who establishes the conditions under which a name listed, for instance, on two censuses should be accepted as identifying the same individual. The proportion of individuals claimed to be listed on two different sources will vary directly with the nature and stringency of the conditions. The problem is particularly acute since the same people usually did not record their identifying characteristics in an identical way on each source. Indeed, even the spelling of the same individual's name often varied in the authors' study of Hamilton, Ontario, in about three fifths of the cases linked between two sources.[3]

The problems of record-linkage must enter into any evaluation or comparison of rates of population persistence because, with few exceptions, historians have used different rules to establish the identity between people listed on two or more sources and, even more troubling, have not specified precisely the conditions they employed. It is thus impossible to compare or replicate their results in any precise way. That is why Thernstrom is correct to emphasize the rough similarity in the rates reported

2 Stephan Thernstrom, *The Other Bostonians: Poverty and Progress in the American Metropolis, 1880–1970* (Cambridge, Mass., 1973), 225.
3 On record linkage see Ian Winchester, "On Referring to Ordinary Historical Persons," and "A Brief Survey of the Algorithmic, Mathematical and Philosophical Literature Relevant to Historical Record Linkage," in E. A. Wrigley (ed.), *Identifying People in the Past* (London, 1973), 17–40, 128–150.

by other historians rather than to stress the differences between them.

However, one source does permit the study of population persistence without recourse to record-linkage: namely, the re- markable New York State Census of 1855, which reported the length of time each person had lived in the town or city in which he or she had been enumerated. This information makes possible three types of measures: average length of residence; rates of population persistence; and the social and demographic determi- nants of length of residence.

Through the calculation of these measures we attempt to advance the study of population persistence beyond the limits of studies based upon record-linkage. At the same time, we provide the first systematic account of variations in length of residence between a city and the rural area that surrounded it. In order to test the representativeness of patterns in Buffalo and Erie County we shall compare them to those in Hamilton, Ontario. The Ham- ilton figures rest on record-linkage, which is a weakness, but we have done the linkage ourselves in a systematic and rigorous fashion.

In this essay, we answer three general questions: How plau- sible are the rates of population persistence that other historians have reported using record-linkage? Did rates of population per- sistence vary between rural and urban areas and among areas with different economic conditions? Why did some people remain longer in the same township, town, or city than others, and were the determinants of individual persistence relatively constant from place to place?

SOURCES AND CONTEXT   The New York State Census of 1855 is the major source for our analysis. Glasco supervised the coding of all available variables for the entire population of Buffalo in that year; the Archives of SUNY-Buffalo kindly made Glasco's data tape available to us for reanalysis.[4] To gain a quick check on the comparability of country and city we coded selected var- iables for a 10 percent systematic random sample of household heads in rural Erie County from the same census. The Buffalo

4 For his interpretation of the census material, see Laurence Admiral Glasco, "Ethnicity and Social Structure: Irish, Germans and Native-Born of Buffalo, N.Y., 1850–1860," unpub. Ph.D. diss (SUNY-Buffalo, 1973).

tape contains information on approximately 69,000 individuals; the rural sample on 1,158 household heads.

We lack an independent check upon the accuracy of the most important variable in the study—the number of years people had lived within the city. However, the information should be more accurate than that derived from record-linkage. There was no reason why people should have lied and, even if their memories had become a bit hazy, they should have remembered the approximate year of their arrival. The likelihood of very large error is much less than in record-linkage. Furthermore, the distribution of years lived in the city or town is encouraging: virtually no "heaping" (clustering around particular numbers) exists prior to twenty years. Thus, most people apparently gave an exact rather than an estimated answer when asked how long they had lived in Buffalo or rural Erie County.

The rate of persistence in Buffalo was significantly higher than the rate in Hamilton, Ontario, and, indeed, in most cities that historians have studied in recent years. The difference between Buffalo and Hamilton reflected their economic environments. If we are right, persistence varied with the nature of social and economic development. Thus, it is critical to describe the context—the nature of the place—in which any study is set.

In 1855 Buffalo was one of the fastest growing cities in the United States: in the previous ten years its population had increased from approximately 35,000 to 72,000. As the western terminus of the Erie Canal, Buffalo was a great center for the transhipment of goods between West and East. In the mid-nineteenth century not only the canal but several railroads provided an extensive transportation network that sustained the city's economic life. The commercial character of the city's economy is important to point out: although the rudiments of an industrial infrastructure were already present, Buffalo had not yet become a manufacturing center.[5]

The region surrounding Buffalo, the rest of Erie County, consisted of rural areas and some sixteen villages of varying sizes

5   On Buffalo in 1855 see *idem*, "Ethnicity and Social Structure," 15–17. For the development of the region see Richard L. Ehrlich, "The Development of Manufacturing in Selected Counties in the Erie Canal Corridor, 1815–1860," unpub. Ph.D. diss. (SUNY-Buffalo, 1972). Our population figures for Buffalo include the Village of Black Rock, which was annexed to the city in 1853.

which acted as service centers within the city's agricultural hin-
terland. Settlement began in most parts of the county during the
first decade of the nineteenth century, and considerable progress
had been made in the establishment of a viable agricultural area
by 1855. Two distinct types of farmland characterized this region,
the flat grain growing area of the north and the hilly, grazing,
livestock area to the south of the city. Thus, at mid-century and
prior to industrialization, the county represented a varied, dy-
namic region.[6]

Buffalo's spectacular growth should not obscure the fact that
the population of rural Erie County also was growing, if at a
slower rate. In the same years that Buffalo expanded from 35,000
to 72,000 people the population of the rest of the county increased
from about 44,000 to 60,000. As should be expected given these
different rates of growth, the average household head had lived
in the county about six years longer than his counterpart in Buf-
falo. Although the proportion of household heads who had lived
in Buffalo less than five years (44 percent) was greater than in
the county (36 percent) the share that had been there one year or
less was quite close: 15.6 percent in Buffalo and 14 percent in
the county (see Table 1). The point of these comparisons is that
despite the pull of a dynamic city, rural Erie County clearly
remained an attractive place. It must have had extraordinary ap-
peal for farmers because Buffalo provided both a huge, expanding

Table 1   Mean Years of Residence, Buffalo and
          Rural Erie County, 1855

	BUFFALO	RURAL ERIE COUNTY
Entire population	6.2	
Household heads		
<25	6.4	11.8
25–34	6.8	10.0
35–44	9.2	12.1
45–54	11.4	16.7
55+	13.4	18.9
All ages	8.8	13.8

SOURCE: Census of New York State, 1855

6   J. H. French, Gazetteer of the State of New York (Syracuse, 1860), 279–294.

market and excellent transportation facilities for the export of produce.

Of course, it would be a mistake to think of the county solely as a region of farms (see Table 2). Although most (64 percent) household heads were farmers, a considerable degree of occupational diversity existed as well: notably, 11.5 percent of household heads were laborers, about 14 percent skilled artisans, 5.5 percent in various kinds of nonmanual work, and 4.9 percent unclassifiable, mainly "gentlemen" (apparently well-to-do landowners). Given the absence of a transport industry, semiskilled workers were almost nonexistent (1.1 percent) in the rural area.

By contrast, the importance of transportation and the key place held by the transhipment of goods in the local economy created a large number of semiskilled and unskilled jobs in Buffalo. Indeed, with its grain mills, canal traffic, and railroads Buffalo offered opportunity to unskilled workers that few cities could rival. It is this presence of economic opportunity for ordinary workers in a dynamic, expanding city, to foreshadow our argument, that gave mid-nineteenth century Buffalo an unusual ability to retain its people.

Important demographic differences existed between the city of Buffalo and its surrounding countryside (Table 2). In the county the largest proportion of household heads (37 percent) had been born in New York State, although only 13.6 percent in Erie County itself. In Buffalo the corresponding proportions were 13 percent and 2 percent. As in Buffalo, the next largest American-born contingent came from New England (15.9 percent) although in the city only 5.9 percent of household heads had been born there. Most striking was the difference between the relative concentration of Germans and Irish. In rural Erie County a hefty 28.5 percent of household heads had been born in Germany and only a sprinkling, 3.5 percent, in Ireland, contrasted to 39.2 percent and 17.0 percent, respectively, in Buffalo. Clearly, Irish immigrants clustered disproportionately in the city while Germans often moved to the country. At the same time the 3.8 percent who were English-born was a smaller proportion than the 7.0 percent in the city, and a significant cluster of household heads born in France lived in the county as well.

The population of county and city varied in more than national origin, for they drew immigrants from different sectors of

Table 2 Occupational and Demographic Characteristics, Hamilton,
1851, Buffalo and Rural Erie County, 1855

HOUSEHOLD HEADS	HAMILTON	BUFFALO	ERIE COUNTY
N	2,314	14,040	1,158
Age structure			
<25	5.0%	5.9%	3.9%
25–34	34.3	37.1	28.2
35–44	31.9	30.8	27.8
45–54	18.5	16.8	20.1
55+	10.2	9.4	20.0
Birthplace			
Native[a]	8.3	21.5	58.0
England	27.4	7.0	3.8
Ireland	39.1	17.0	3.5
Germany	0.8	39.2	28.5
Other	24.4	15.3	6.2
Land ownership			
Land-owning	31.0	34.4	71.6
Non-land-owning	69.0	65.6	28.4
Occupational rank			
1 Professional-Proprietor	9.9	4.2	2.9
2 Other white collar	15.3	11.7	2.6
3 Skilled	38.0	36.5	13.1
4 Semiskilled	7.2	4.6	1.1
5 Unskilled	18.6	14.3	11.5
6 Unclassified	11.0	28.6	4.9
Farmers	—	—	63.8

Employment in manufacturing: entire population

	HAMILTON	BUFFALO	
N	1,729	6,960	
Textile and apparel	31.5%	20.8%	
Wood products	10.1	12.8	
Metal products	12.7	16.9	
Food and beverage	6.1	6.0	
Construction	27.4	35.4	
Other	12.1	8.1	

a For Hamiltonians native birthplaces include Canada, Nova Scotia, New Brunswick,
and Prince Edward Island. For residents of Buffalo and Erie County natives were consid-
ered to be those who had been born in the United States.
SOURCE: Census of New York State, 1855; Census of Canada, 1851

New York State. The leading areas, in terms of sending people to Buffalo, were among the largest and most heavily urbanized of New York's sixty counties (see Table 3). For the most part, the agriculturally oriented counties contiguous to Erie County were not the sources for significant numbers of the city's residents. Since the 1855 census did not list origins below the county level, we cannot be very precise about the town or city in which migrants to Buffalo had been born. Nevertheless, these figures do suggest that one major component in the circulation of people

Table 3   Counties Contributing at Least 2 Percent of the New York State-born Household Heads Living in Buffalo in 1855[a]

COUNTY	LEADING CITY OR TOWN	% OF N.Y. BORN	STATE POPULATION RANK	APPROXIMATE DISTANCE FROM ERIE COUNTY[c]	% URBAN[d]
Erie	Buffalo	19.2	3	0	57.9
New York	New York	9.0	1	293	100.0
Oneida	Utica/Rome	5.2	4	171	30.2
Albany	Albany	4.6	5	240	71.7
Genesee	Batavia	4.5	39	30	15.9
Monroe	Rochester	4.2	6	60	47.8
Onandaga	Syracuse	2.8	7	130	35.4
Saratoga	—	2.7	20	245	25.9
Washington	—	2.6	24	270	16.3
Herkimer	—	2.5	34	183	20.4
Cayuga	Auburn	2.3	17	108	25.2
Ontario	—	2.2	29	75	24.6
Montgomery	—	2.1	42	218	16.4

Counties Contributing at Least 2 Percent of the New York State-born Household Heads Living in Rural Erie County in 1855[b]

COUNTY	LEADING CITY OR TOWN	% OF N.Y. BORN	STATE POPULATION RANK	APPROXIMATE DISTANCE FROM ERIE COUNTY[c]	% URBAN[d]
Erie	Buffalo	36.5	3	0	57.9
Otsego	—	4.9	19	188	0.0
Herkimer	—	4.4	34	183	20.4
Washington	—	4.0	24	270	16.3
Rensselaer	Troy	3.7	9	267	52.6
Genesee	Batavia	3.3	39	30	15.9
Cayuga	Auburn	3.3	17	108	25.2
Dutchess	Poughkeepsie	2.8	15	264	30.0
Oneida	Utica/Rome	2.6	4	171	30.2
Saratoga	—	2.3	20	245	25.9
Onandaga	Syracuse	2.1	7	128	35.4

a   N = 1,783
b   N = 4,300 (based upon a 10% random sample of household heads)
c   Straight-line distance between County centroids
d   Calculated from Census of New York State, 1855 (Urban = more than 1,000 people)

throughout New York State must have been inter-urban. The figures on the origins of migrants to rural Erie County point to the other component, for a different set of counties is prominent. First, Erie County itself was a much more significant source of New York State-born household heads. For the most part the other important originating counties were agriculturally oriented and located in the far eastern parts of the state. Erie County probably acted as a final or intermediate stop for people moving westward from the older settled areas of the United States. To be sure, urban people migrated to the country and rural people to the city, but those who did so appear to have been going against the general migratory patterns in mid-nineteenth century New York.[7]

RATES OF PERSISTENCE   Most people in Buffalo were newcomers. It is to be expected that a population that had doubled in ten years would have consisted mainly of immigrants. The average resident had lived in Buffalo 6.2 years. More meaningfully, the average household head had been there only 8.8 years, and the difference between the length of time that the average member of the youngest cohort of employed males (18 to 24 year olds) and the eldest (55+) had lived in the city was only 7 (6 vs. 13) years. By contrast, the household heads had lived in rural Erie County an average of 13.8 years, about 6 years longer than in the city.

    However, the recency with which most people had arrived reveals little about the proportion of those already present ten years earlier who remained. To estimate this figure—the rate of persistence—it was necessary to calculate the proportion of the 1845 population formed by 1855 residents who claimed to have lived in the city for at least ten years. Attempts to make estimates of persistence in this manner encountered two problems. First, the 1845 census for New York State did not break down the

7   For an excellent discussion of these patterns in a later period see Michael P. Conzen, "Local Migration Systems in Nineteenth-Century Iowa," *Geographical Review*, LXIV (1974), 339–361. His study was based upon an analysis of aggregated statistics in the 1895 census of Iowa. For a discussion of migration patterns into Syracuse, N.Y., which also utilizes the 1855 New York State census, see Roberta Gay Balstad Miller, "City and Hinterland: The Relationship between Urban Growth and Regional Development in Nineteenth-Century New York," unpub. Ph.D. diss. (University of Minnesota, 1973), 147–176.

population by age groups. Therefore, we had to assume a similarity in the age-structure between the two points in time. This undoubtedly introduced some bias into the estimates. In estimating the number of household heads, we also had to assume that household size remained the same, which also probably introduced a minor degree of error into the calculations.

Second, mortality presents a problem. Most studies of persistence do not account for death: rates usually reflect the assumption that all people resident at one point in time remained alive at the next census. This, of course, cannot be true. The real question is, how much difference would mortality make in the calculation of persistence? In Buffalo, correction for mortality increased the estimate of total male persistence by 3 percent and of the persistence of household heads who had been 30 to 59 years old in 1845 by 10 percent.

We derived estimates of persistence for survivors in Buffalo between 1845 and 1855 by matching Vinovskis' life-expectancy estimates for Boston c. 1850 with model life-tables from Coale and Demeny. Model West, level 12, with a life expectancy from birth of 47.5 years for women and 44.5 for men, fit well. Using these tables we computed the probability of survival for each age cohort and compared the actual number within the cohort that had reported living in Buffalo at least ten years with the predicted number of survivors.[8] (See Table 4.)

Overall, the rate of persistence in Buffalo was high compared to that found in other large cities in roughly the same time period. Just over half (51 percent) of all survivors—53 percent of women and 49 percent of men—had remained within the city. The relation between persistence and age assumed a predictable U-shaped curve among men: 44 percent of the 0 to 9 year olds persisted, a figure that dropped to a low of 37 percent among 20 to 29 year olds, rose rapidly to 52 percent among 30 to 39 year olds, and became nearly universal among men 60 years old and over. Thus, as all studies of migration have shown, men moved most freely in their twenties prior to settling down, and only infrequently during old age.

For women the relation between age and persistence was

8 Maris A. Vinovskis, "Mortality Rates and Trends in Massachusetts before 1860," *Journal of Economic History*, XXXII (1972), 184–213; Ansley J. Coale and Paul Demeny, *Regional Model Life Tables and Stable Populations* (Princeton, 1966).

similar, with two significant differences. The persistence of women 0 to 9 and 20 to 29 was higher than that of men: 59 percent compared to 52 percent and 44 percent compared to 37 percent. Young women probably left the city in search of job opportunities much less frequently than men, and on the average they married four years earlier. After the age of thirty, persistence rates among surviving men and women became virtually identical.

Household heads, as we might expect, migrated less often than other individuals of the same age, although, as the multivariate analysis to be described in the next section will show, it was the number of children rather than the headship of a house-

Table 4 Persistence Figures for Buffalo and Erie County, 1845–1855, Corrected for Mortality

AGE 1845	1855	N (1845)	SURVIVAL RATE	ESTIMATED SURVIVORS TO 1855		PERSISTERS	RATE
All Males—Buffalo							
0–4	10–14	2,807	.858	2,408	4,337	2,269	.523
5–9	15–19	2,011	.959	1,929			
10–19	20–29	3,120	.942	2,939		1,402	.477
20–29	30–39	4,749	.920	4,369		1,629	.373
30–39	40–49	2,981	.888	2,647		1,372	.518
40–49	50–59	1,456	.828	1,205		709	.588
50–59	60–69	624	.707	441		286	.649
60–69	70–79	208	.487	101	121	120	.992
70+	80+	104	.188[a]	20			
Total males				16,059		7,787	.485
All Females—Buffalo							
0–4	10–14	2,739	.867	2,375	4,233	2,516	.594
5–9	15–19	1,941	.957	1,858			
10–19	20–29	3,536	.943	3,334		1,649	.495
20–29	30–39	3,952	.924	3,652		1,590	.436
30–39	40–49	2,288	.905	2,071		1,085	.524
40–49	50–59	1,213	.869	1,054		600	.569
50–59	60–69	589	.763	449		294	.655
60–69	70–79	243	.550	134	158	144	.911
70+	80+	104	.230[a]	24			
Total females				14,951		7,878	.527
Total				31,010		15,665	.505

Table 4   (cont.)

AGE 1845	1855	N (1845)	SURVIVAL RATE	ESTIMATED SURVIVORS TO 1855	PERSISTERS	RATE
Household Heads—Buffalo						
20–29	30–39	1,909	.920	1,756	1,412	.804
30–39	40–49	2,450	.888	2,176	1,261	.580
40–49	50–59	1,257	.828	1,041	664	.630
50–59	60–69	551	.707	390	242	.621
60–69	70–79	157	.487	76 ⎱ 85	67	.788
70+	80+	48	.188[a]	9 ⎰		
Total				5,448	3,646	.669
Age 40–69 (1855)				3,607	2,167	.601
Male Household Heads—Rural Erie County[b]						
25–29	35–40	1,012	.914	925	630	.681
30–39	40–49	2,472	.888	2,195	1,470	.670
40–44	50–54	1,161	.845	981	760	.774
45–49	55–59	805	.803	646 ⎱	1,550	.739
50–54	60–64	863	.743	641 ⎰ 2097		
55+	65+	1,659	.488	810		
Total				6,198	4,410	.711
Ages 35–54 (1855)				4,101	2,860	.697

a   Estimated from the English life table for 1861, because Coale and Demeny provide no estimates for cohorts over 80 years of age.
b   The number of household heads in rural Erie County in 1845 was estimated from figures in the 1850 United States census. The age distribution for these men was assumed to be the same as that in 1855. Survival rates were calculated in the same manner as those for the urban population.
SOURCE: Census of New York State 1845 and 1855

hold that affected their propensity to remain within the city. Here the figures are reliable for those household heads age thirty or over in 1845, for it is difficult to estimate what proportion of the men 30 to 39 years old in Buffalo in 1855 actually had been household heads ten years earlier. Persistence was lowest (although still high—58 percent) among 30 to 39 year olds; it increased about 5 percent among 40 to 49 and 50 to 59 year olds and jumped to 79 percent among those 60 years old and over. Overall, about 60 percent of those household heads aged 30 to 69 in 1845 stayed in Buffalo for a decade.

In rural Erie County surviving household heads persisted at a rate about 10 percent higher than in the city. Roughly 70 percent of the surviving 25 to 54 year olds in 1845 remained in the same township, town, or village during the next decade. Differences between country and city existed within age groups as well as between the populations as a whole: for instance, 67 percent of the rural 30 to 39 year olds persisted compared to 58 percent of those in the city. Clearly, rural household heads formed a stable group: only about 30 percent left during the decade.

The 60 percent rate of household-head persistence in Buffalo is high, between 50 percent and 100 percent higher than most scholars in the field would have predicted on the basis of work published to date. From a different perspective, a very substantial fraction (40 percent) of household heads were on the move.

The comparative perspective is the most important. The rate of persistence in Buffalo appears to be much higher than in other cities.[9] How should this conclusion be interpreted? Three major possibilities exist. First, previous studies have underestimated the rate of persistence. Given the technical problems in linkage, this cannot be discounted. However, the rate of household-head persistence in Hamilton, which we have calculated ourselves with methods in which we have confidence, was substantially lower, 46 percent between 1851 and 1861 and 44 percent during the next decade, taking mortality into account.[10] Second, perhaps the length of time that people reported themselves resident in Buffalo was distorted badly, but there is no reason to believe that this was the case. Third, the rate of population movement varied substantially among nineteenth-century cities. For instance, Buffalo's greater prosperity and growth made it a more attractive place in which to settle than Hamilton and offered opportunities that people would find difficult to match elsewhere. Consequently, they remained more often within the city.

We return to the implications of this possiblity later. First,

9   See, for instance, Table 9.1 in Thernstrom, *Other Bostonians*, 222–223. An unscientific and random request put to people working in the field to estimate the persistence of household heads in Buffalo between 1845 and 1855 elicited responses varying from 20 to 40 percent.

10 Katz, Doucet, and Stern, "Population Persistence in Hamilton, 1851–1861 and 1861–1871," Working Paper 22, Social History Project, York University (1977).

what influenced the length of time that any individual had lived in Buffalo?

LENGTH OF RESIDENCE   We begin by distinguishing between two concepts: length of residence and persistence. The average length of residence in any one place might be short but the rate of persistence high. For instance, an expanding job market might attract a large number of workers, whose length of residence in the city, if measured not long after their arrival, would be brief. However, if economic conditions remained buoyant, a substantial proportion might remain within the city, which, consequently, would have a high rate of persistence. This is a schematic version of what we believe happened in Buffalo.

Is it possible to account systematically for the length of time people lived in Buffalo? To answer this question, we used years resident in the city as a dependent variable in a series of multivariate analyses. The technique used, Multiple Classification Analysis (MCA), is a form of regression designed for use with categorical variables, which makes it more appropriate for the data in this study than ordinary multiple regression.[11]

We performed MCA's with various subsets of Buffalo's population: the entire population, employed household heads, employed males in each of three age groups (18 to 24, 25 to 54, 55 and over), and all females in each of three age groups (16 to 24, 25 to 54, and 55 and over). The sample of Erie County household heads has been treated as a unit.

The interaction of the variables affecting length of residence differed according to age group and sex, which is the reason that we partitioned the population.[12] Moreover, in the case of household heads in Buffalo, significant two-way interactions between

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11   Frank M. Andrews, et al., *Multiple Classification Analysis; A Report on a Computer Program for Multiple Regression Using Categorical Predictors* (Ann Arbor, 1973). In the MCAs in this paper, we have made no attempt to construct formal causal models. Rather, we have used regression-type analysis for purposes of "estimation". (Cf. Hubert M. Blalock, Jr., *Causal Inferences in Nonexperimental Research* [N.Y. 1964], 38–44). As we argue, the complexity of our dependent variable's interrelations with other factors is such that recursive models (one-way causality) are out of the question. Thus, our ordinary least squares (OLS) estimations are addressed to questions of the *relative predictive value* of certain variables. In other analyses of wealth, occupation, and homeownership we have employed "years in city" as an independent variable in a similar manner.
12   *Ibid.*, 20–21.

variables existed. Therefore, we carried out one MCA in which each independent variable—called factors in MCA—is a composite of two variables. This eliminated most two- and three-way interactions. The analysis that follows discusses factors that consist of both single and, where appropriate, combined variables. In this way, our analysis takes into account the impact of interaction effects between factors upon length of residence.

We group the factors that affect length of residence into three broad categories: ascribed qualities, position in the life-cycle, and achieved characteristics.

ASCRIBED QUALITIES: AGE, BIRTHPLACE, AND SEX   Among the entire population of the city length of residence increased in a linear fashion with age (see Table 5). However, the differences between groups were relatively small, which reveals that other factors muted the impact of age. (Here and in all subsequent discussions of MCA results the differences or scores that form the results of the analysis refer to a group average with all other factors held constant.) For instance: a 25 to 34 year old person had been in the city only .16 of a year longer than an 18 to 24 year old and a 45 to 54 year old 1.45 years longer than a 35 to 44 year old. If age alone had been operative, we should expect

Table 5   Average Number of Years in City for Selected Categories of People, All Factors Constant, Buffalo, New York, 1855

I. ENTIRE POPULATION	
Age	MEAN YEARS IN CITY
10–17	6.1
18–24	7.5
25–34	7.7
35–44	9.6
45–54	11.2
55+	12.9
Marital Status	
Married	6.6
Single	6.0
Widowed	6.6
Sex	
Male	6.1
Female	6.3

Table 5   (cont.)

II. MALES AND FEMALES BY AGE COHORTS

	MALES			FEMALES		
	18–24	25–54	55+	16–24	25–54	55+
Mean Years in City	6.0	8.0	13.0	6.6	8.2	11.9
Birthplace						
New England	6.4	10.0	17.2	6.5	10.6	16.2
New York	10.4	11.2	17.0	10.8	11.8	15.7
Ireland	4.6	8.0	8.9	4.8	6.6	8.0
Germany	4.4	6.5	10.6	5.1	6.5	9.1
Household and Marital Status						
Single child	10.0	13.7	a			
Single boarder	4.6	6.0	9.3			
Single relative	6.3	7.9	9.9			
Married child	9.3	13.1	15.4			
Married boarder	2.3	4.7	1.0			
Married relative	7.7	7.0	10.1			
Married household head	6.2	8.2	13.4			
Widowed boarder	a	4.9	15.3			
Widowed relative	a	5.1	14.5			
Widowed household head	a	8.7	12.5			
Household Status						
Head				5.0	9.3	15.6
Spouse				6.4	8.3	13.8
Child				8.5	11.5	6.8
Relative				5.3	6.4	9.1
Boarder				4.5	6.6	7.0
Servant				5.7	6.9	14.9
Inmate of institution				3.2	2.9	0

III. HOUSEHOLD HEADS

Occupational Rank by Birthplace

BIRTHPLACE	OCCUPATIONAL RANK				
	1	2	3	4	5
New England	9.1	10.1	11.6	10.1	10.3
New York	9.1	11.0	12.4	11.6	12.0
Ireland	8.1	7.2	8.6	9.1	8.4
Germany	7.1	8.9	7.8	8.0	6.8

Table 5 (cont.)

Age and Number of Children

AGE	NUMBER OF CHILDREN			
	0	1–2	3–4	5+
Less than 25	6.6	8.2	9.1	13.0
25–34	6.4	7.2	8.5	9.7
35–44	7.8	7.9	9.0	10.9
45–54	9.9	11.0	11.1	11.9
55+	13.5	12.7	12.4	11.3

Dwelling Value per Capita and Property Ownership

DWELLING VALUE PER CAPITA OCTILE	PROPERTY STATUS	
	OWNER	RENTER
1 (lowest)	10.2	6.2
2	10.1	6.2
3	10.1	6.3
4	10.5	6.4
5	10.7	6.7
6	12.8	6.7
7	13.4	7.5
8 (highest)	27.6	8.8
N = 10,022		

a No or insufficient cases.
SOURCE: Census of New York, 1855. For complete tables see "Working Papers" #10–11 York Social History Project. All results derived from MCA. All factors are significant at the .001 level.

these differences to have been closer to ten years. Similar differences existed among male household heads: a 45 to 54 year old had lived in Buffalo 1.55 years longer than a man aged 35 to 44.

With one exception, patterns in rural areas paralleled those in the city (see Table 6). The exception occurred among household heads less than 25 years old, who actually had lived in the same town or village longer than either those 25 to 34 or 35 to 44 years old. These young men may well have been sons who had been given land by their fathers. Overall, 25 to 34 year old household heads had lived in the same town or village six years less than those over the age of 55 and five years less than those 45 to 54 years old. Thus, as in the city, although age was important, other factors obviously diluted its effect.

Younger people born in New York State, as one could pre-

Table 6   Average Number of Years Resident in Same Township or Village: Household Heads, Rural Erie County, New York, 1855.[a] All Factors Constant

	YEARS RESIDENT	N		ETA (unadj.)	BETA (adj.)
Mean	13.8				
Sex					
Male	13.7	1,119	Sex	.04	.06
Female	10.2	39	Birthplace	.43	.35
Birthplace			Land	.34	.20
New England	17.2	184	Age	.28	.19
New York	17.2	430	Occupation	.29	.14
Middle States	20.0	49	Sig. Main Effects:	.001	
South	9.9	8	R²: .299		
Old North West	11.5	1			
Canada	8.6	9			
England	9.6	44			
Ireland	9.7	40			
Scotland	7.4	6			
Germany	8.4	330			
West Europe	12.0	54			
East Europe	22.2	2			
Other	9.4	1			
Land					
Non-land-owning	9.9	329			
Land-owning	12.3	829			
Age					
Less than 25	12.6	45			
25–34	11.4	326			
35–44	12.5	322			
45–54	15.9	233			
55+	17.2	232			
Occupation					
Prof. prop.	10.3	34			
White collar	9.4	30			
Skilled	12.5	152			
Semiskilled	8.7	13			
Unskilled	11.4	133			
Unclassified	15.5	57			
Farmer	14.8	739			
N		1,158			

a   Based on a 10% sample of all household heads.
    Dependent Variable = years resident in township or village in which enumerated.
SOURCE: Census of New York, 1855

dict, had lived longer in the city (Table 5). The average residence of 18 to 24 year old New York-born males, for example, exceeded the average by 4.4 years and of 16 to 24 year old women by 4.2 years. The New England-born had lived in Buffalo for the second

longest period but lagged far behind New Yorkers except among men and women at least fifty-five years old, when the averages for the two groups became very nearly equal. These averages mean that a man fifty-five years old or more born in New England had lived in Buffalo about sixteen years, or since 1839. Those 25 to 54 years old had been there about twelve years or since 1843. Essentially, these figures point to a heavy migration into Buffalo from the mid-1830s through the mid-1840s of New England-born adults.

The average length of residence of the two major foreign-born groups, Irish and Germans, reflected the recency of their migration to America. Among all 25 to 54 year old employed males, for instance, the Irish born had been in Buffalo 2.0 and the Germans 3.5 years less than the New England born. For women of the same age the discrepancy between New England and Irish and German born was 4.0 and 4.1 years, respectively.

The interaction between birthplace and occupation, it should be noted, does not alter these conclusions. Within each occupational rank New Englanders and New Yorkers had lived in Buffalo substantially longer than Irish and Germans. With the exception of clerks and lower-level white collar workers, the Irish in each occupational rank usually had lived in Buffalo longer than the Germans (Table 5).

Similar relations existed between birthplace and length of residence in rural Erie County (Table 6). Among household heads there, New England and New York birth added 3.4 years to average length of residence; English and Irish birth lessened it about equally, 4.3 and 4.1 years, and German birth decreased it by 5.5 years. In other words, on the average a household head born in England or Ireland had been in the same township, town, or village within the county about eight years less, and a German about nine years less, than one born in New England or New York.

Within the city, sex did not alter length of residence among the population as a whole (Table 5). However, female household heads had lived in Buffalo 3.9 years longer than males, roughly 12 compared to 8 years.[13] Did their prolonged residence reflect choice, a secure economic position, or were they trapped and

13 Michael B. Katz and Michael Doucet, "The Determinants of Length of Residence in Buffalo, N.Y., 1855," York Social History Project *Second Report* (Toronto, 1976), 62.

unable by themselves to move to a more appealing place? We cannot shed very much light at present on this obviously important question. However, in the county the association of sex and length of residence was exactly the reverse of the situation in the city. There, women who headed households had lived in the same town or village 3.5 years less than men (Table 6). Again, we are left with a finding for which we have no ready explanation.

LIFE-CYCLE: HOUSEHOLD AND MARITAL STATUS; NUMBER OF CHIL-DREN   Marriage and household-headship by themselves had surprisingly little relation to male length of residence in Buffalo (Table 5). In fact, by itself marriage added almost nothing to the length of time a person had been in the city. By contrast, the men who had lived in the city longest dwelled with their parents. Men 18 to 24 years old living with their parents had been in Buffalo 3.8 and those 25 to 54 years old 5.5 years longer than married men in the same cohorts. Conversely, unmarried boarders had lived in Buffalo for the shortest time, two to four years less than married men of the same age.

Inmates of institutions were especially transient (Table 5). Despite their small numbers, all the results point in the same direction: women age 16 to 24 in institutions had lived in Buffalo 3.4 years less than the average for women of the same age, a gap that increased to 4.3 and 11.9 years among women in the two older cohorts. Similarly, women relatives and boarders had arrived in Buffalo much more recently than either women living with their parents or spouses, or than widows. Among 25 to 54 year old women, for example, relatives had been in the city 1.9 and boarders 1.7 years less than wives. It was the headship of a household, we should stress, not simply widowhood, that increased the length of time a woman had dwelled in Buffalo: widowed household heads age 25 to 54 had been in the city 9 years compared to 6 for widowed relatives. Over the age of 55 the average length of residence for the two groups was sixteen and nine years.

As in the case of men, marriage itself had almost no relation to a woman's length of residence in Buffalo. Similarly, employment played virtually no role: hardly any difference existed at any age between those women reporting an occupation and those listing none.

By itself, the number of his children had no association with a man's length of residence in the city. However, when combined with age, it became a very significant factor (Table 5). Generally, within each age group a linear relation existed between the number of children living at home and the length of residence in the city. Thus, household heads aged 25 to 34 with no children had lived in Buffalo .8 years less than those with 1 to 2, 2 years less than those with 3 to 4, and 3.3 years less than those with 5 or more children.

Interestingly, the relation between the number of children and the length of residence became inverse among the oldest household heads; those with the smallest families had been in the city the longest time. However, their family size did not reflect fertility, for their children already had begun to leave home. The range of difference in length of residence, moreover, varied much less with number of children than it did among younger men, which indicates, as one might expect, that family size simply became less important among the elderly. People over the age of fifty-five, as we already observed, did not leave the city very often.

ACHIEVED CHARACTERISTICS: OCCUPATION, ECONOMIC RANK, AND PROPERTY   Most students of nineteenth-century cities argue that transiency varied inversely with occupational rank: the unskilled moved most often, professionals and proprietors least. Either the dynamics of population movement differed in Buffalo, or other studies have erred, for we discovered little direct association between occupation and length of residence when we controlled for other factors.[14]

Men in rank 2 (primarily clerks and other white-collar workers) had been in the city the longest, but only about one-half year more than the average, while men in the highest ranking occupations (mainly merchants, professionals, and other entrepreneurs) had lived there for the shortest period, about one year less than the average (Table 5). These differences are trivial. They mean that occupation had virtually no independent relationship to length of residence in Buffalo.

14 The occupational ranking used here consists of five levels: 1) the highest, mainly professionals and proprietors; 2) clerks, white-collar workers, small proprietors; 3) skilled workers; 4) semiskilled workers; 5) the unskilled, primarily laborers.

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As in the city, occupation exerted surprisingly little inde-
pendent influence upon length of residence in the county (Table
6). Farmers and gentlemen had lived there longer than others,
but among nonfarmers no class-related distinctions existed. Com-
pared to a farmer, a laborer had lived 3.4 years less in the same
town or village, a professional or proprietor 4.5, and an artisan
2.4 years.

Why has occupation appeared an important factor in other
studies? One reason may be that most have relied upon descriptive
statistics. Simple cross-tabulations may indicate that people in
higher occupational ranks had persisted more often than those
beneath them when, in reality, the distinctions reflected the varied
age and ethnic composition of occupational groups. Indeed, when
we contrast Hamilton with Buffalo in the next section of this
paper we shall observe this effect: cross-sectional analysis reveals
a distinction that an analysis that takes interaction effects into
account shows to be spurious. For in Hamilton as well as in
Buffalo occupation had only a marginal relation to persistence.

In Buffalo, the interaction between occupation and ethnicity
significantly affected length of residence (Table 5). Within each
occupational rank, New England- and New York-born household
heads had lived in Buffalo longer than those born in Ireland and
Germany. Among household heads, a native New Yorker in rank
1 had lived in Buffalo 9.1, a New Englander 9.1, an Irishman
8.1, and a German 7.1 years. In rank 3, among the same four
groups, the years resident in the city were 12.4, 11.6, 8.6, and
7.8. Even at the bottom of the rank order, among laborers, the
same type of difference remained.

Occupation interacted with age as well as with ethnicity
(Table 5). Among 18 to 24 year olds little difference existed
between men in different occupational ranks; in the 25 to 54 year
old cohort some small distinctions began to emerge; and, consid-
ering only men at least fifty-five years old, fairly sharp variations
in length of residence became evident. Professionals in that age
group had lived in Buffalo one and one half years more than
merchants, two years more than clerks and almost four years
more than laborers, whereas patterns among artisans varied with
particular trades. Thus, until middle age, men with various oc-
cupations migrated more or less randomly as both manual and
nonmanual workers moved from place to place in search of suc-

cess. Gradually, professionals and entrepreneurs established them-
selves and settled in one place; unable to do likewise, some artisans
and many laborers just kept drifting.

No direct measure of wealth or economic rank appears on
the census of 1855. The only economic figure is the value of the
dwelling in which each person resided. At first, this appeared an
unhelpful statistic until we discovered that problems with its
interpretation arose from the presence of more than one family
in the same dwelling, each of which had been assigned the total
dwelling value. This created a sizeable problem because 24 percent
of the dwellings housed more than one family, or, put another
way, 46 percent of the families lived in multi-family dwellings—
probably as a result of the city's rapid growth. Further, dwellings
often were not divided between families of equal size: houses
built for one family were subdivided, sometimes, into a reason-
ably sized space for a family and a small apartment for one person
or a couple. Thus, we determined the most discriminating figure
to be the per capita dwelling value of the space occupied by each
family, calculated by the following formula:

$$DV/C = \text{Dwelling Value} \times \frac{\text{(No. in Household)}}{\text{(No. in Dwelling)}}$$

This figure is analagous to the total assessed value used as a
surrogate for economic rank in our work on Hamilton. In fact,
the cross-tabulation of per capita dwelling value (DV/C) with
other variables indicates that it serves as well as a rough proxy
for economic rank.[15]

Clear and linear relations existed between economic rank
(DV/C) and length of residence in Buffalo. Household heads in
the lowest quarter of the rank order had been in the city about
eight years compared to ten and eleven years for those in the
third and highest quarters. Even though the relations are linear
the differences are not very large, which points to the fact that,
though significant, the association of economic rank with length
of residence remained slight.

Unlike occupation or economic rank, property ownership
revealed a very strong relation to length of residence. Employed
household heads who rented their homes had been in the city—

15   In the MCAs, DV/C octiles were used as a categorical variable.

all factors held constant—seven years compared to eleven and one half for owners. Among men 18 to 24 the difference in lengh of residence between renters and owners was six compared to nine years; among 25 to 54 year olds it was six to eleven years; and among those 55 years old or over, eleven and sixteen years. Clearly, property ownership had a greater association with persistence than either economic rank or occupation.

The relation between economic rank and property ownership makes the importance of property even more striking. Within each economic rank owners had been in the city substantially—about 4 or 5 years—longer than renters (Table 5). And, controlling for property ownership, economic rank itself had no relation to length of residence, except near the very top of the rank order. However, even the "wealthiest" renters had been in the city for a shorter time than the "poorest" owners.

As in the city, ownership of land formed the most important correlate of length of residence in the country (Table 6). In fact, the actual relation of property ownership to other factors was quite similar in both areas: the difference in length of residence between owners and nonowners was 5.5 years in the country and 4.4 in the city.

In essence, the household heads most likely to have lived in rural Erie County for the longest period of time were men born in New England or New York, who owned land, farmed, and were older than forty-five. By contrast, a propertyless German laborer of the same age had been there for the fewest years. Clearly, the *accumulation* of differences rather than any one specific factor created the very real distinctions in length of residence among rural household heads. The New Englander, cited above, would have lived there about twenty-two and the German about four years.

The same point can be made for the city: the accumulation of characteristics, rather than any single factor, accounts for the length of time a person had lived in Buffalo. New England or New York birth, combined with a high ranking occupation, middle age, a large family, wealth, and property ownership, together interacted to prolong length of residence. For instance, a man in the highest occupational rank, born in New England or New York, age 45 to 54 years old, with five or more children, who owned his home and was in the top octile on our measure of economic rank, would have lived in Buffalo about thirty-one

years in 1855. By contrast, an Irish labourer, also 45 to 54 years old, with one or two children, who rented, and ranked in either the first or second octile, would have dwelled in the city only about eight years. Of course, even the knowledge of individual characteristics does not permit the prediction of length of residence with complete accuracy. For the most part, the analyses on which this article rests—in both city and county—explain between 25 percent and 30 percent of the variance among men, and even less among women, which are reasonably high proportions for nominal data of this sort. There are primarily three ways in which to account for the unexplained variation: unmeasured factors, measurement error, and randomness. Despite factors that we cannot measure—such as individual success within an occupation—and despite, undoubtedly, an unavoidable amount of measurement error, we opt for randomness as the principal culprit. Very simply, in the mid-nineteenth century, all sorts of people were on the move; we have discovered the major trends or patterns within a fluid, mobile society.

BUFFALO AND HAMILTON   Did the same forces at work in Buffalo shape the residential experience of people in other nineteenth-century cities? To answer that question, we compared the characteristics of household heads who had persisted at least ten years in Buffalo and Hamilton, Ontario. Overall, recall, the rate of persistence in Hamilton was roughly 16 percent lower than in Buffalo. The decade for which persistence was measured in Buffalo was 1845–1855, in Hamilton 1851–1861. That difference probably is crucial since the Buffalo measure preceded the 1857 depression, which had a devastating effect upon Hamilton. The Hamilton data, moreover, rest on record-linkage: the joining together of the property assessment and census records from each end of the decade.

    Like Buffalo, Hamilton was a lakeport that expanded at an enormous rate during the 1840s. Although a commercial city, Hamilton remained much smaller, about 18,000 to 20,000 in 1855 compared to 72,000 in Buffalo.[16] After its initial growth spurt, Hamilton's population increased much more slowly than Buf-

16 Since there were no census data for Hamilton in 1855, the population figure for that year represents an estimate. Persistence in Hamilton between 1851 and 1861 is discussed in Katz, *People of Hamilton*. Currently, we are completing a study of persistence there which both corrects for mortality and compares the 1851–1861 with the 1861–1871 rates.

falo's and its economy remained less vibrant for many years. Important demographic differences existed between the two cities as well: Hamilton contained very few Germans but relatively larger proportions of English, Scottish, and Irish Protestants.

In each city natives (that is United States or Canadian born) were represented disproportionately heavily among the persisters (see Table 7). A difference, however, existed in the case of Irish-born household heads: they were underrepresented among persisters in Buffalo and very slightly overrepresented in Hamilton. Perhaps the presence of a substantial fraction of relatively well-to-do Irish Protestants in Hamilton comprised the critical factor. (One difference between American and Canadian censuses is that the latter listed religion.)

Household characteristics of the groups in each city paralleled each other: those that had persisted at least ten years more often had servants, boarders, relatives, and large (four or more children) families. And, most of all, they were very much more likely to own property (Table 7).

In each city, men in occupational rank 1 were overrepresented among persisters; those in rank 3 represented proportionally; and those in the lowest rank underrepresented, although more noticeably in Buffalo than in Hamilton. (Recall that this does not contradict our earlier point about the overall lack of relation between length of residence and occupation. Here we see similar patterns, but they are the result of the interaction of occupation with age, birthplace, and property-ownership.) Buffalo's booming economy may have attracted a relatively large number of unskilled workers during the decade. Finally, the wealthy were overrepresented among persisters in each city, although, again, in Buffalo the poor were underrepresented to a greater extent than in Hamilton, undoubtedly for similar reasons (Table 7).

Similar dynamics shaped persistence in each city. The ownership of property emerged as most important, native birth next, reinforced to some extent by occupation, wealth, and family characteristics, and modified by local conditions.

The ownership of property affected length of residence more than any other factor; conversely, length of residence greatly influenced the likelihood of homeownership. The problem is that the formulation is circular. We need to unravel far more precisely the elusive process of property acquisition, a task at least as difficult as plotting the factors associated with persistence. Unfor-

Table 7 Comparative Statistics for Persisters and Nonpersisters, Buf-
falo and Hamilton Household Heads: Index of Represen-
tativeness[a]

VARIABLE NAMES	BUFFALO[b]		HAMILTON[c]	
	LESS THAN 10 YEARS	AT LEAST 10 YEARS	LESS THAN 10 YEARS	AT LEAST 10 YEARS
Birthplaces:				
New England	59	180	—	—
New York	75	149	—	—
Other United States	71	154	—	—
United States	—	—	105	92
Canada	84	128	90	117
England & Scotland	95	106	101	98
Ireland	113	75	93	112
Germany	114	73	139	26
Western Europe	75	149	—	—
Others	134	44	137	30
Household Characteristics:				
No servants	106	88	104	94
No boarders	101	99	101	100
Property ownership	71	158	—	154
Four or more children	82	136	85	127
No relatives	103	95	101	99
Three or fewer in household	114	74	112	77
Single family dwelling	88	123	—	—
Occupational rank				
1 Professional-Proprietor	76	150	82	133
2 Other white collar	83	132	100	99
3 Skilled	102	96	98	103
4 Semiskilled	96	109	109	81
5 Unskilled	121	61	107	87
6 Unclassified Farmers	98	102	101	101
Wealth:				
Dwelling value 0–25	120	60	—	—
Dwelling value 76–100	71	154	—	—
0–39 percentile	—	—	—	89
80–100 percentile	—	—	—	266
N =	9,281	4,759	2,276	1,237

a % of Household Heads in sub-category/% of all Household Heads in category × 100
b SOURCE: New York State Census, 1855, Mss.
c SOURCE: Census of Canada 1851 and 1861, Mss. Wealth data from the City of Hamilton Assessment Roll, 1861.

tunately, most of our attempts to explain property ownership
account for about the same share of the variance as our forays
into length of residence, a proportion much lower than we

reached in our studies of other social structural characteristics, notably economic rank and the employment of servants.[17]

Aside from the probing of property acquisition, the similarities and differences between Hamilton and Buffalo point to another critical task for students of migration, which has been apparent throughout this discussion: namely, the need for a theory of migration that filters fairly general social structural processes through the peculiarities of economic cycles and local circumstances. The dynamics may have been similar, but the context made the difference.

CONCLUSION   A number of patterns emerge quite clearly from our analysis:

First, the rate of population persistence during a time period (such as a decade) must not be confused with the average length of residence. Neither, taken alone, expresses the significance of population movement. In Buffalo the short average length of residence did not reflect a population in constant flux, for persistence remained relatively high. Rather, it stemmed from massive, recent in-migration.

Second, the variation in rate of persistence between Hamilton and Buffalo shows how population movement varied directly with economic opportunity.

Third, a number of factors affected length of residence:

(1) Although marriage by itself had little relation with men's length of residence, the number of children and kin in a household did exert a significant, settling effect.

(2) The length of time younger men had lived in the city bore no relation to their occupation. Instead, occupation became more prominent in the case of older men: professionals and proprietors successfully established themselves and settled; laborers and some artisans, unable to find steady work in one place, kept wandering.

(3) Although modest, the association of economic rank with length of residence was direct and linear.

(4) Birthplace was related to length of residence in obvious

17   Other recent efforts by the authors to study these questions include: Michael B. Katz, "The Structure of Inequality Revisited Once More: A Multivariate Analysis of Stratification," and Mark J. Stern, "Homeownership: A Multivariate Analysis," York Social History Project *Second Report* (Toronto, 1976).

ways: through the recency of Irish and German immigration, the effect of birth within New York State, and particular patterns of movement, especially the westward path of New Englanders.

(5) Property ownership increased length of residence more than any other factor.

Fourth, the social and demographic structure of length of residence was similar in Buffalo, rural Erie County, and Hamilton. However, the same factors operated with varying degrees of strength in different contexts.

Fifth, the accumulation of a variety of characteristics—birthplace, age, marital status, family size, occupation, wealth, and property ownership—accounted for differences in the length of time that individual people had lived within the city or county. Nonetheless, residential experience remained to a substantial degree the result of chance, the product of countless individual decisions, timing, caprice, and luck.

One moral of this article should be clear: we cannot assume the existence of a relatively uniform rate of population persistence in different towns, cities, and regions. Migration responded to economic opportunity, and the relatively similar rates that historians thus far have uncovered probably reflect the crudity of instruments of measurement rather than a real uniformity in nineteenth-century North America.

Thus, our hypothesis is that rates of population persistence and in-migration varied systematically with patterns of economic development. This proposition is testable with the New York State Census of 1855. A sample drawn from the entire state would permit the calculation of rates for places as varied as New York City and areas that relied primarily on subsistence farming.

What difference—and this is our last major question—would it make to know that rates of population persistence varied systematically from place to place? It matters because the answer has immense significance for the interpretation of community in North America.

Consider the magnitude and nature of population movement as both index and influence. First, as an index: population movement probably reflected the state of the labor market. A high rate of persistence and an influx of unskilled workers revealed, as in Buffalo, exceptionally attractive job opportunities. High rates of out-migration showed just the opposite, and differential

rates may have registered quite sensitively variations in opportunity within particular sectors of the economy.

Patterns of residential stability also showed how the life-cycle varied according to social class. In Buffalo we noted that the generally high rate of out-migration among all young men diminished sharply in the case of professionals and proprietors who settled as they succeeded. Out-migration remained substantially higher, however, among unskilled workers, who much less often had the job stability that permitted them to settle.

Thus, migratory patterns reveal one dimension of inequality in nineteenth-century society. The privilege of class was translated into the privilege of stability. Residential stability—like property, a good job, or a reasonable income—became a reward, a tangible benefit spread unevenly among the people. Therefore, within nineteenth-century towns and cities historians might study the rate of population persistence as one component in a complex structure of inequality.

Population movement was more than a reflex of economic opportunity and the distribution of privilege. It also affected community cohesion, local political processes, and the permeability of local society. Consider three hypothetical situations. In the first, everyone was on the move. The rate of out-migration remained high and relatively undifferentiated by class, age, or ethnicity. In this situation population movement weakened community cohesion and integration. Local politics were chaotic; little effective civic action or social development could take place. However, local society could not exclude people very effectively: social organizations and informal groups were wide open to newcomers.

In the second situation out-migration varied by social class. Although working-class people usually did not stay very long within the city, a prosperous and relatively stable group of community leaders existed. Consequently, a small sector of the population shared a highly developed sense of community and controlled local politics. Local political decisions reflected the interests of these community leaders, who vigorously promoted the social and economic development of their town or city. Within the town, working-class social groups remained relatively open to newcomers, upper-class ones relatively closed.

Clearly, we believe this second pattern characterized nineteenth-century North American cities to varying degrees. Despite

its high rate of population turnover, to take one example, Ham-
ilton contained a group of prosperous, long-term residents who—
relatively unopposed—shaped the development of the city in their
own interests.[18] This pattern is the one we should expect during
the development of industrial capitalism. Poorly paid wage la-
borers formed a reserve army of underemployed floating from
city to city in response to the variations in a job market controlled
by a relatively stable group of capitalists. The amount of working-
class population movement, in fact, might have reflected the state
of capitalist development. Variations in rates of population move-
ment could reveal not only differences in economic opportunity
but the uneven penetration of wage-labor as well.

A third hypothetical situation also exists: namely, a high
degree of stability. This should have contributed to a broadly
shared sense of community; effective resistence to the political
domination of a faction; a reasonably broad sharing of power;
and extensive property ownership, creating, along one dimension
at any rate, a more equal society. General stability and widespread
property ownership certainly characterized rural Erie County in
contrast to Buffalo. However, the stability in the county appar-
ently did not mark the experience of at least one area in rural
Ontario, Peel County, in the same years. There, patterns of mi-
gration more closely resembled those in Hamilton.[19] The differ-
ence between places with varied rates of stability reflected a good
deal more than a simple distinction between city and country. If
migration affected the nature of local society, then we should
expect marked differences in the cohesion and political processes
of these two rural counties, roughly fifty miles apart.

The magnitude and composition of migration probably also
affected the circulation of information and ideas. People were
carriers of news, innovation, and, sometimes, cultural variety.[20]

18 Katz, People of Hamilton, 176–209. See also J. A. Bryce, "Patterns of Profit and
Power: Business, Community and Industrialization in a Nineteenth Century Canadian
City," unpub. paper (York University, 1977); Michael J. Doucet, "Building the Victorian
City: The Process of Land Development in Hamilton, Ontario, 1847–1881," unpub.
Ph.D. diss. (University of Toronto, 1977).
19 Gagan and Mays, in "Historical Demography." For data on another rural area see
Ingrid Erikson and John Rogers, "Mobility in an Agrarian Community: Practical and
Methodological Considerations," in Kurt Agren, et al. (eds.), Aristocrats, Farmers, Prole-
tarians: Essays in Swedish Demographic History (Uppsala, 1973), 60.
20 See Allan R. Pred, Urban Growth and the Circulation of Information: The United States
System of Cities 1790–1840 (Cambridge, Mass. 1973).

Although population turnover weakened communal integration, at the same time it enhanced local vitality and introduced a liveliness and cosmopolitanism into places that otherwise would have remained more isolated and provincial. Perhaps close study of the nature of migration could provide a substructure for cultural as well as social history.

From a slightly different perspective, massive migration gave to the forms of culture—especially artisan culture—a significance different from that which they originally had in Europe, a fact perhaps underestimated by labor historians engaged in making the North American working class fit a British model.[21] Old country *forms* such as societies, riots, festivals, and parades undoubtedly did exist in North America. However, here they never had been based upon the face-to-face relationships that grew out of long acquaintance among the members of a stable community. In North America festivities brought together strangers or, at least, relatively new acquaintances so that mutual participation in the same events or societies did not reflect long-standing friendship but, to the contrary, shared objective characteristics, such as birthplace, religion, or occupation. Although the shell was traditional, the forms of artisan culture contained the kernel of the organizations which germinated into the rationalized, bureaucratic order of the modern world.[22] Combined with high rates of transiency, perhaps on balance artisan traditions facilitated the adaptation of working people to the social relations of industrial capitalism.

Migration surely affected family life and social institutions as well. The effectiveness of local schools, for instance, probably varied directly with the degree of population turnover. Extensive

21 For the United States, see Herbert G. Gutman, "Work, Culture, and Society in Industrializing America, 1815–1919," *American Historical Review*, LXXVIII (1973), 531–589. For Canada, see Gregory S. Kealey, "The Orange Order in Toronto: Religious Riot and the Working Class"; Bryan D. Palmer "Give us the road and we will run it: The Social and Cultural Matrix of an Emerging Labour Movement," in Gregory S. Kealey and Peter Warrian (eds.), *Essays in Canadian Working Class History* (Toronto, 1976), 13–34, 106–124.
22 The rise of a "rational" bureaucratic social structure in late-nineteenth century America is dealt with in Robert H. Wiebe, *The Search for Order, 1877–1920* (New York, 1967); Samuel P. Hays, *The Response to Industrialism 1885–1914* (Chicago, 1957). Gabriel Kolko, *Main Currents in Modern American History* (New York, 1976), 67–99, points to the immigrant's high rate of transiency and shallowness of cultural ties as key elements in the development of the American working class.

movement limited the potential of even the best schools and created enormous problems for school boards that had to attempt to predict the number of children in transient urban populations.[23]

On a less tangible plane, the degree to which the population around them swirled and the frequency with which they themselves moved partially shaped the way in which people viewed their world. Friendships were difficult to maintain; ties to individual places were tenuous; and, after a while, people were reluctant to invest their emotions heavily in the neighbors or places which they soon would leave. Rootlessness bred a detachment from community that led people to turn inwards toward the one unit that retained its shape: the family of husband, wife, and children. The isolation of the conjugal family, we might speculate, varied directly with the rate of population turnover. Thus, the restless movement of nineteenth-century people contributed to the inward concentration—that intensification of domesticity—that became the hallmark of the modern family.[24]

One last thought on the general meaning of population movement: we have argued that high rates of population turnover worked against the development of a local sense of community cohesion and integration. Its national effect, nonetheless, might have been quite the opposite. The continual circulation of population throughout a continent created continuous human contact, a network of communication, and a sense of identification with other places that decreased the strangeness of Boston in Buffalo, diminished the distance between New Hampshire and Wisconsin, and brought Toronto closer to Winnipeg. Whatever its local effects, perhaps the restless, driven movement of their people unwittingly helped to create two sprawling and improbable nations on one continent.

23   Haley P. Bamman, "Patterns of School Attendance in Toronto, 1844–1878: Some Spatial Considerations," in Michael B. Katz and Paul H. Mattingly (eds.), *Education and Social Change; Themes from Ontario's Past* (New York, 1975), 217–245.
24   See, for example, Edward Shorter, *The Making of the Modern Family* (New York, 1976).