

**“Restless in the Midst of their Prosperity”:
New Evidence on Internal Migration of Americans,
1850-2000**

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The quantity and character of internal migration in the American past is a contentious historiographical issue. Over a century ago, Frederic Jackson Turner pointed to westward migration as a “safety valve” that profoundly affected the nature of the republic. With the closing of the frontier, Turner predicted that the population flow to the West would decline. Turner’s twentieth-century critics argued that the greatest American population movement was not westward expansion, but rather urbanization, which accelerated throughout the nineteenth and twentieth centuries. Beginning in the 1960s, social historians using new quantitative approaches fleshed out the critique of Turner, arguing that high migration to and between urban areas in the nineteenth century did not result in improved economic opportunity.

This article uses new evidence to reevaluate internal migration in the American past. Our three major findings are consistent with Turner’s interpretation. First, we identify a U-shaped pattern of change: the nineteenth century had the highest overall levels of migration, followed by a decline in the first half of the twentieth century and a resurgence after World War II. Thus, by the time Turner wrote about the closing of the frontier, a dramatic decline in mobility was already underway. The highest mobility in American history occurred during the first half of the nineteenth century, and there was a steady decline in interstate mobility until well into the twentieth century. Second, we show that the high levels of nineteenth century migration resulted from long-distance westward migration to farms, whereas the high migration of the late twentieth century can be ascribed to white suburbanization and black migration to northern cities. Finally, we look briefly at the relationship between geographic mobility and social mobility, and find evidence suggesting that migration may have improved economic opportunity.

Migration and American History

In *Democracy in America*, de Tocqueville devoted an entire chapter to explaining “why the Americans are so restless in the midst of their prosperity.”¹ The high mobility of nineteenth century Americans was widely remarked upon, and it was usually explained in terms of the plentiful availability of land. Joseph Kennedy, superintendent of the census of 1850, regarded high migration as an “unfavorable trait in our national character.” But Kennedy predicted that the mobility would not last: once the plains had been settled and the cheap land was gone, we would settle down and “the inhabitants of each state would become comparatively stationary.”²

Four decades later, Fredrick Jackson Turner began his famous essay by quoting another superintendent of the census. Because of the settlement of the interior, the 1890 census showed for the first time that the frontier line no longer existed. Turner argued that “movement has been [the] dominant fact” of the American past, but the era of westward expansion was ending: “...the frontier has gone, and with its going has closed the first period of American history.”³ Turner’s frontier thesis included four specific hypotheses about the migration process: first, the nineteenth century was the greatest period of migration in American history; second, the magnet for migration was the economic opportunity offered by the availability of agricultural land in the ever-moving western frontier; third, these agricultural opportunities provided a hopeful alternative for the surplus labor supply crowding the urban centers of the east; and finally, with the closing of the frontier, American migration would lose its force.⁴

Turner’s critics challenged these four hypotheses. They argued that movement to the frontier was only the first major migration stream in American history—important but neither the largest nor the most significant. Movement out of rural areas into towns and

cities, already beginning in the middle of the nineteenth century, was economically more important and demographically more powerful. Soon after Turner's dramatic pronouncement about the frontier, scholars were documenting the role of migration in the burgeoning American cities.⁵ Economic opportunity awaited in the country's urban industrial centers. Turner's interpretation of the west-as-safety-valve was turned on its head: according to the new interpretation, the cities were absorbing surplus farm labor.⁶ The new migration centered on urban economic opportunity and its growth engine was cheap automobiles, not cheap land.

The available statistics seemed to support the interpretation that movement to cities was more important than westward migration. Already by 1870, eight American cities reported that out-of-state migrants constituted more than a fourth of their native-born population. Even in the west, the 1900 census showed that fewer than half the population lived on farms. By 1920 the trend was clear; more Americans lived in cities than in rural areas.⁷

By the mid-twentieth century, the crude census statistics on interstate movement then available suggested that migration was at an all-time high. Since 1850, the census has inquired about the state of birth and state of residence of each individual in the population. For each succeeding decade, the Census has published sufficient information to calculate the percentage of native-born persons who were interstate migrants. These statistics are given in Figure 1. There was a slight decline in the percentage of interstate migrants between 1870 and 1900 followed by a dramatic increase over the course of the twentieth century. This pattern supported the view of those scholars who argued that

twentieth-century urbanization was a more important migration stream than nineteenth-century westward expansion.⁸

[Figure 1 about here.]

A different picture emerged when historians began to use the manuscript censuses to trace social and geographic mobility in nineteenth century communities. These investigators attempted to link individuals from one census to the next, and found that the great majority simply disappeared from the community. The extraordinary population turnover implied by these analyses was one of the core findings of the new social history. The earliest studies focused on frontier areas, and generally seemed consistent with Turner's interpretation: not only did two-thirds to three-fourths of working age men disappear in each decade between 1850 and 1880, but newcomers usually experienced upward economic mobility.⁹

In the 1960s and 1970s, historians began to apply the same techniques to urban areas, and found similar rates of disappearance.¹⁰ The urban studies, however, suggested less upward social mobility than did the frontier analyses. Stephan Thernstrom, in particular, challenged Turner's interpretation that migration was a safety valve. He disputed the contention that working-class emigrants from eastern cities were drawn to better economic opportunity on the agricultural frontier. Rather, he maintained, these workers formed a "floating" labor force of "permanent transients," "buffeted about from city to city within the New England labor market."¹¹

Was the nineteenth century a period of comparatively low migration, as suggested by the published census data on state of birth, or of very high migration, as implied by the historical community studies? Neither approach is sufficient to answer this question. The

published census estimates based on birthplace are inappropriate for long-run comparisons because they do not control for age. Because of high fertility and mortality, the mid-nineteenth century population was very young: half the people in 1850 were aged 18 or younger, compared with only a quarter today. Children are less likely than adults to have migrated, simply because they have had less time in which to do so. Thus, any long run analysis of migration that fails to account for changes in the age of the population will understate nineteenth century migration relative to twentieth-century migration.

The historical studies using record linkage are equally problematic. Because such studies cannot be carried out for the recent past, long-run comparisons are impossible. Moreover, not all linkage failures are due to migration, and the community studies apparently exaggerate the extent of migration. The 1855 census of New York included an inquiry on the number of years each individual had resided in the community, and migration estimates from this source are substantially lower than directly comparable estimates based on record linkage. Many historians have had difficulty linking even contemporaneous sources to the nineteenth century census, probably because of census underenumeration or errors in the recording of names.¹²

Long-run migration trends

We use the Integrated Public Use Microdata Series (IPUMS) to assess long-run trends in the level and characteristics of internal migration. The IPUMS is a coherent national database describing the characteristics of 70 million Americans in every census year from 1850 through 2000 except for 1890 and 1930. The project created large national samples of the censuses of 1850 through 1920 by entering information from microfilm of the original enumeration forms. The IPUMS combines these historical data with samples from 1940 to 2000 prepared by the Census Bureau. This project is now

nearing completion; we lack data only for the 1890 and 1930 census years, giving us a nearly continuous record of American migration over the past 150 years.¹³ By putting all the samples into the same format, imposing consistent variable coding, and carefully documenting changes in variables over time, the IPUMS makes it practical to use the census samples as a time series.

According to the definitions used by the U.S. Census Bureau, a migrant is someone who changes residence and crosses a political boundary. Since 1850, the census has recorded both state of residence and state of birth for each respondent; it is therefore straightforward to identify interstate migrants throughout the past 150 years. The census did not record the specific location of birth, so we cannot identify intrastate movers. Moreover, since we can identify only that migrants are living outside of their state of birth at the time of the census, repeat migrants who have lived in several states and return migrants who have resettled in their home states cannot be identified.¹⁴

Our focus is on permanent interstate migration rather than temporary migration for work or school. We measure the percentage of persons aged 50 to 59 who resided outside their state of birth. By focusing on a particular age group, we minimize distortion from the changing age composition of the population. Analysis of the 50-59 age group minimizes the impact of short-run labor and educational migration, which is concentrated among persons aged 18 to 49. Moreover, by excluding persons aged 60 or more, we eliminate most retirement migration, first observed in the 1930 census but more significant in recent years.¹⁵

Analysis of the percentage of migrants among persons in their fifties yields very different results from previously available estimates of long-run migration trends. Figure

2 reports the standardized interstate migration estimates for persons aged 50 to 59 between 1850 and 2000.¹⁶ Among both whites and blacks, there was a clear U-shaped pattern of migration. Whites had the highest percentage of migrants in the earliest three census years, and the percentage of migrants dropped from 1880 to 1940. The percentage of white migrants remained low until the 1970 census, and has been rising for the past three censuses.

[Figure 2 about here.]

Blacks shared a U-shaped pattern of migration, but the timing was different. Migration data for blacks are not consistently available until the 1870 census, since the census did not gather such information for the slave population. The percentage of black interstate migrants was relatively high in the 1870 and 1880 censuses. The nadir in the percentage of black migrants occurred in 1910, thirty years before the low point for whites. In the censuses of 1950 to 1960, when white interstate migration was comparatively low, black migration was higher than at any previous census. In the past two decades, however, the percentage of black migrants has dropped significantly, and is now lower than the percentage of white migrants.

When assessing the chronological pattern of migration, it is important to bear in mind that these are dates of the census, not the dates in which the migration actually occurred. Census data show that the peak ages of interstate migration are the twenties and thirties, so most of the migration shown in Figure 2 probably occurred several decades before the date of each census.¹⁷ For whites, therefore, migration probably began to decline around the Civil War, reached a low point from World War I through the depression, and began to rise after World War II. For blacks, the high migration reflected

in the 1870 and 1880 censuses occurred mainly before the Civil War and was primarily movement of slaves, whereas the high migration of the recent period corresponds to the great northward migration of blacks between 1915 and 1970.

The data unequivocally support the contention of Thernstrom, Knights, Katz, and others that the nineteenth century was a period of extraordinarily high population movement. They are also consistent with Turner's prediction that the closing of the frontier would lead to a decline in mobility. Indeed, among whites aged 50 to 59, the proportion of migrants was 41 percent greater in 1850 than in 1940. By 2000, the proportion of white migrants had recovered, but it remained 12 percent lower than in the mid-nineteenth century.

Figure 3 breaks the results down by sex. As predicted by some migration theorists, among whites there was a long-run decline in the gender gap in migration: in the early censuses, males were fourteen to nineteen percent more likely to have migrated than were females, but this difference gradually diminished over time and virtually disappeared after 1950.¹⁸ Among blacks, however, female migration was lower than male migration in all periods, but there is no consistent chronological trend.

[Figure 3 about here.]

Migration flows and destinations

It is clear that the nineteenth century was a period of extraordinary interstate migration for whites, but did this reflect agricultural settlement on the western frontier or movement to and between cities? To address this question, we first need to investigate migration flows. To assess flows, we calculated movements between and within each of five regions: the Northeast, Southeast, North Central, South Central, and West. The regions are identified in Figure 4. Where flows were consistently small—such as West to

Northeast—we aggregated them into larger groupings to make the patterns easier to interpret.

[Figure 4-map of census regions about here].

Figures 5 and 6 describe the migration flows for blacks and whites, respectively.¹⁹ These are area graphs; the width of each band in each census year reflects the percentage of persons aged 50-59 who had migrated along the indicated path. As shown in Figure 5, the very high interstate migration of early nineteenth century whites was primarily long-distance movement westward from the east coast states, especially from the Northeast region to the North Central Region. As the eastern part of the North Central region began to fill up in the second half of the nineteenth century, there was a second wave of westward movement within the North Central region, from states like Ohio, Michigan, and Indiana into rapidly growing farm states such as Minnesota, Wisconsin, and Iowa. Were it not for these dramatic movements to and within the Midwest, nineteenth century migration would have been considerably lower than that of the twentieth century. The other tail of the U—the rise in white migration after World War II—was broadly based, but was led by southward migration from the North Central and Northeastern regions.

[Figures 5 and 6 around here]

Black patterns of interstate migration, shown in Figure 6, differed sharply from those of whites. The high migration of the nineteenth century resulted from the transfer of slaves from the old South to the new cotton producing areas of Alabama, Mississippi, Louisiana, and East Texas. The second peak of black migration, seen in the censuses of 1940 through 1990, resulted from the great migration of blacks from the South to northern and western cities.

Migration to the central part of the country dominated interstate population movements in the mid-nineteenth century among both blacks and whites; the principal differences were that black migration in that period was usually involuntary and the primary destination was the South Central region rather than the North Central region. In the twentieth century, blacks headed for northern destinations and whites were increasingly likely to move south. Thus, the superficial similarity of the U-shaped migration trends among whites and blacks masks substantial differences in their destinations and motivations for moving.

We can also assess the type of destinations of migrants. In Figures 7 and 8, destinations are classified as farms (units including a farmer or identified as a farm by the census); rural non-farm (places of under 2,500 population); towns (places of at least 2,500 outside a metropolitan area); large cities (central places with 50,000 or more people in a metropolitan area); and suburbs (places outside of central cities that are within metropolitan areas).²⁰ The graphs are consistent with Turner's view of long-distance migration: in the mid-nineteenth-century, more than 90 percent of white migrants and 80 percent of blacks went to rural areas. Three-fourths of the white migrants to rural areas went to farms.²¹

[Figures 7 and 8 around here]

White migration to cities increased gradually between 1850 and 1950 and remained strong through the rest of the twentieth century, but that new migration stream was overwhelmed by declining migration to farms. We should note, however, that this measure does not capture the full extent of movement to cities, since we can only measure migrations that involved crossing state lines. For blacks, migration to cities

drove the great migration, and the percentage of blacks in their fifties who had migrated did not peak until 1980. The rise in migration for whites since World War II resulted entirely from suburbanization, and was doubtless partly a consequence of the movement of blacks to central cities during the preceding decades.²²

Social mobility and migration selectivity

The Thernstrom hypothesis that the high migration of the nineteenth century reflected a floating proletariat moving from town to town in search of work gets little support from the new census data. As we have seen, most white migrants in the mid-nineteenth century went to farms, and most black migrants apparently moved as slaves. In addition, however, the census reveals that the group of male migrants who were not farmers generally included a greater percentage of men in higher status occupations than did the group of non-migrant non-farmers who remained behind. Figures 9 and 10 show the percent migrant by occupational status for employed male non-farmers. In all periods for both whites and blacks, white collar workers were more likely to have moved across state lines than were skilled or unskilled workers, and the differences were particularly pronounced in the nineteenth century.²³

[Figures 9 and 10 around here]

One of the most potent criticisms the safety-valve thesis was that the poor lacked sufficient resources to move West and establish a farm; even when land was inexpensive or free, it took money to travel west and purchase the equipment and supplies needed to farm.²⁴ Thus, according to this argument, migration was concentrated among those who were already doing well. Although our data cannot tell us how much money migrants had before they left, we do have information about their education. From 1850 to 1920, the census inquired about literacy. From 1940 onward, the census substituted a question on

educational attainment for the inquiry on literacy. Those with the least education were probably concentrated among the poor. Since most people would have acquired literacy and primary education prior to migration, these measures provide clues about the pre-migration socioeconomic status of eventual migrants.

Figures 11 and 12 show the percent migrant among whites and blacks by literacy and completion of the fifth grade of school. From 1870 onwards, the results are consistent with past research on migration selectivity: those with the least education were least likely to move.²⁵ By contrast, before 1870—the period when westward migration to farms was at its peak—illiterate whites were substantially more likely to have migrated than were persons who could read and write. These data do not tell us whether the very high mobility of the illiterate in the early nineteenth century was associated with upward economic mobility; the results therefore could be consistent with either the safety valve hypothesis or Thernstrom's interpretation. The data do, however, clearly reveal a precipitous drop in the mobility of the poorly educated among both whites and blacks during the latter part of the nineteenth century, suggesting a fundamental shift in the relationship of socioeconomic status to migration.

[Figures 11 and 12 around here]

Cross-sectional sources like the IPUMS cannot resolve the issue of the relationship between geographic mobility and economic mobility, since they do not reveal the occupations or wealth of migrants before they left home. New nationally representative linked census samples being compiled by Joseph P. Ferrie provide more direct evidence on the relationship between geographic and occupational mobility. Ferrie's work suggests that nineteenth century urban laborers made up a substantial

portion of the westward migration stream, and as a group, those migrants did far better than laborers who stayed in the eastern cities. Ferrie's most recent analysis also indicates that upward social mobility was far more frequent in the United States than in England and Wales.²⁶ These results are still preliminary, but if confirmed they will provide powerful support for Turner's safety valve interpretation: nineteenth-century westward migration offered an escape for large numbers of urban workers.

Conclusion

Nineteenth-century Americans were extraordinarily mobile. Despite the difficulty of travel, almost half of the population moved across state lines, and most of those migrants moved long distances. The bulk of mid-nineteenth-century migrants moved to the Midwest, and almost nine out of ten went to rural areas. Just as Turner predicted, the closing of the frontier in 1890 led to a dramatic decline in westward migration to rural areas. Among whites, even the lure of the cities could not stem the precipitous decline of mobility; it was not until the rise of the suburbs following the Second World War that interstate migration began to return to its historic levels. For blacks, however, the history of internal migration is sharply different. Free blacks never migrated west to farms in large numbers. The great migration of blacks occurred in the early and mid-twentieth century, dominated by movement from the South to large cities in the Northeast and North Central regions.

Turner's thesis generated one of the great debates in American historiography. His critics found numerous inconsistencies, and made a plausible case that he exaggerated the significance of the frontier in the development of American character and democratic institutions. On several key empirical points, however, Turner got it right. The mass movement to the frontier in the nineteenth century was extraordinary, and it is

reasonable to infer that a demographic experience of such magnitude would have profound implications for social mobility and political institutions. The metaphor of the safety valve may be appropriate: the availability of Western land probably did increase economic opportunity. Turner's greatest insight, perhaps, was his prediction of the sea change in American migration patterns; the closing of the frontier led to a precipitous decline in westward migration.

Turner did not predict the twentieth recovery of migration. The closing of the frontier was not the end of American restlessness. The nonlinear trend in American migration revealed by the IPUMS represents a significant revision of the demographic literature. For the first time, we can see the U-shaped curve of American migration history: there were two great periods of intense interstate migration over the last 150 years separated by an intervening trough of relative stability.

Notes

¹ Alexis de Tocqueville, *Democracy in America, Volume II* (New York, 1945).

² Joseph Kennedy, *Report of the Superintendent of the Census for December 1, 1852* (Washington, 1853), 15; quoted by Everett S. Lee, "Migration in Relation to Education, Intellect, and Social Structure," *Population Index*, (Oct.-Dec. 1970), 437-44; quote from page 437.

³ Frederick Jackson Turner in a speech before the American Historical Association, July 12, 1893, published in the *Proceedings of the Forty-first Annual Meeting of the State Historical Society of Wisconsin* (Madison, 1894), 79-112.

⁴ Central to Turner's thesis was the contrast of the socially fluid frontier with the closed social structure of the industrial East. Beginning with Charles Beard, much of the early critique of Turner's thesis focused on his conception of the western frontier as the locus of democratization and individual mobility that define the character of Americans. A prerequisite of this thesis was the ability of Americans to migrate freely within the vast boundaries of nation. Charles A. Beard, "The Frontier in American History," *New*

Republic, (Feb. 16, 1921), 349-350. For a thorough discussion of Turner's early critics, see Allan G. Bogue, "Frederick Jackson Turner Reconsidered," *The History Teacher*, 27 (Feb. 1994), 195-221. Everett S. Lee suggested that Turner was right about the central role of migration but wrong in assigning the defining power to the destination—the frontier. It was the process of migration, itself, Lee argued, that defined Americans, not the specific place they might land at any particular moment. Lee, "The Turner Thesis Reexamined," *American Quarterly*, 13 (Spring 1961), 77-83.

⁵ One of the first was Adna Ferrin Weber, *The Growth of Cities in the Nineteenth Century; A Study in Statistics* (New York, 1899).

⁶ Fred A. Shannon, "A Post-Mortem on the Labor-Safety-Valve Theory," *Agricultural History*, 19 (Jan. 1945), 31-37.

⁷ C. Warren Thornthwaite, *Internal Migration in the United States* (Philadelphia, 1934); Conrad Taeuber and Irene B. Taeuber, *The Changing Population of the United States* (New York, 1958).

⁸ Hope T. Eldridge and Dorothy Swaine Thomas derived estimates of the intercensal change in the native-born population of each age group in each state

attributable to migration. The Eldridge-Thomas analysis showed little secular trend in net displacement for the white population, and gave no hint that the nineteenth century was a period of especially high migration. These estimates have significant limitations; because they measure displacement, in-migration and out-migration cancel one another out. Moreover, the measures are highly sensitive to errors in the mortality estimates and changes in the completeness of census enumerations; during the past four decades, our understanding of both mortality and census underenumeration has been substantively revised. Eldridge and Thomas, *Population Redistribution and Economic Growth: United States, 1870-1950. III: Demographic Analyses and Interrelations* (Philadelphia, 1964).

On revised estimates of mortality and underenumeration, see for example J. David Hacker, "The Human Cost of War: Southern Population and Family Structure in the Era of the American Civil War," (Ph.D. dissertation, University of Minnesota, 1999) and Michael R. Haines, "Estimated Life Tables for the United States, 1850-1910," *Historical Methods*, 31 (Fall 1998), 149-69.

⁹ James C. Malin, "The Turnover of Farm Population in Kansas," *Kansas Historical Quarterly*, 4 (Nov. 1935), 339-372; Merle E. Curti, *The Making of an*

American Community: A Case Study of Democracy in a Frontier Community (Stanford, CA, 1959); Mildred Throne, "A Population Study of an Iowa County in 1850," *Iowa Journal of History*, 57 (Oct. 1959), 305-330; Peter J. Coleman, "Restless Grant County: Americans on the Move," *Wisconsin Magazine of History*, 46 (Autumn 1962), 16-20; Richard Steckel, "Household Migration and Rural Settlement in the United States, 1850-1860," *Explorations in Economic History*, 26 (April 1989), 190-218; and David W. Galenson and Clayne L. Pope, "Economic and Geographic Mobility on the Farming Frontier: Evidence from Appanoose County, Iowa, 1850-1870," *Journal of Economic History*, 49 (Sep. 1989), 635-56.

¹⁰ Stephan Thernstrom, *Poverty and Progress: Social Mobility in a Nineteenth Century City* (Cambridge, Mass., 1964); Stuart Blumin, "Mobility and Change in Antebellum Philadelphia," in *Nineteenth-Century Cities*, ed. Stephan Thernstrom and Richard Sennett (New Haven, 1969), 165-208; Peter R. Knights, *The Plain People of Boston, 1830-1860: A Study in City Growth* (New York, 1971); John Modell, "Peopling of a Working-Class Ward: Reading, Pennsylvania, 1850," *Journal of Social History*, 5 (Fall 1971), 71-96; Stephan Thernstrom, *The Other Bostonians: Poverty and Progress in the*

American Metropolis, 1880-1970 (Cambridge, 1973); Howard M. Gitelman, *Workingmen of Waltham: Mobility in American Urban Industrial Development, 1850-1890* (Baltimore, 1974); Michael B. Katz, Michael J. Doucet and Mark J. Stern, "Migration and the Social Order in Erie County, New York, 1855," *Journal of Interdisciplinary History*, 8 (Spring 1978), 669-701; Laurence Glasco, "Migration and Adjustment in the Nineteenth-Century City: Occupation, Property and Household Structure of Native-Born Whites, Buffalo, New York, 1855," in *Family and Population in Nineteenth Century America*, ed. Tamara Haraven and Maris Vinovskis (Princeton, 1978), 154-78; Clyde Griffin and Sally Griffin, *Natives and Newcomers: The Ordering of Opportunity in Mid-Nineteenth Century Poughkeepsie* (Cambridge, Mass., 1978); Thomas Dublin, "Rural-Urban Migrants in Industrial New England: The Case of Lynn, Massachusetts, in the Mid-Nineteenth Century," *The Journal of American History*, 73 (Dec. 1986), 623-44.

Two studies have attempted national-level record linkage: Avery M. Guest, "Notes from the National Panel Study: Linkage and Migration in the Late Nineteenth Century," *Historical Methods*, 20 (Spring 1987), 63-77; and Joseph P. Ferrie, *Yankeys Now: Immigrants in the Antebellum United States, 1840-1860* (New York, 1999).

¹¹ Thernstrom, *Poverty & Progress*, 31.

¹² David P. Davenport, *Population Persistence and Migration in Rural New York, 1855-1860* (New York, 1989). For estimates of census underenumeration and discussion of other problems with historical migration data, see John W. Adams and Alice Bee Kasakoff, "Estimates of Census Underenumeration Based on Genealogies," *Social Science History*, 15 (Winter 1991), 527-43; Stephan Thernstrom and Peter R. Knights, "Men in Motion: Some Data and Speculations About Urban Population Mobility in 19th Century America," *Journal of Interdisciplinary History*, 1 (1970), 7-35; Peter R. Knights, "Potholes in the Road of Improvement? Estimating Census Underenumeration by Longitudinal Tracing: U.S. Censuses, 1850-1880," *Social Science History*, 15 (Winter 1991), 517-26; Donald H. Parkerson, "How Mobile Were Nineteenth-Century Americans?" *Historical Methods*, 15 (1982), 99-110.

¹³ Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander. Integrated Public Use Microdata Series: Version 3.0 [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2004. The IPUMS database and

complete documentation are available online at <http://ipums.org>. Samuel Preston of the University of Pennsylvania created the original sample for 1910, and Halliman Winsborough of the University of Wisconsin oversaw creation of the samples for 1940 and 1950. No microdata are available for 1890 because the original enumeration sheets were lost in a fire before they could be microfilmed. The IPUMS project is near completion of a sample for 1930.

¹⁴ The underestimation problems associated with the state of birth/state of residence methodology were thoroughly discussed by Everett Lee and his colleagues in their demographic analysis of internal migration. See Everett S. Lee, Ann Rathner Miller, Carol P. Brainerd and Richard A. Easterlin, *Population Redistribution and Economic Growth: United States, 1870-1950. I: Methodological Considerations and Reference Tables* (Philadelphia, 1957), 58-60.

¹⁵ Taeuber and Taeuber, *Internal Migration in the United States*, 109.

¹⁶ The data in figures 2 and 3 are standardized to control for the changing distribution of population in states of different sizes. In 1850, the population was concentrated in the comparatively small states along the east coast; by the late twentieth

century, many more people resided in the large states of the Midwest, Pacific Coast, and Southwest. This population shift from small states to larger states means that raw statistics on the percentage of persons who had moved across state boundaries may exaggerate the extent of physical movement in the mid-nineteenth century compared with the late-twentieth century. To adjust for this potential bias, we used direct standardization. We divided states into seven size categories, and weighted the results to hold the size distribution of states constant over time. The size-standardized percentage of persons aged 50 to 59 residing outside their state of birth at time t is calculated as

$$m_t = \sum_s m_{st} \cdot P_s,$$

where m_{st} is the percentage of outmigrants born in states of size s at time t and P_s is the proportion of the standard population born in states of size s . The standard population is the average of the size distribution of birthplaces for the native-born across all census years. The size categories are under 5,000 square miles; 5,302 to 6,695; 19,912 to 23,159; 25,862 to 28,997; 30,521 to 34,040; 35,938 to 37,702; and 41,599 or over. We combined West Virginia (15,508 square miles) and Virginia (26,091 square miles) because

individuals born before 1863 in the new state of West Virginia often reported Virginia for a birthplace. Alaska and Hawaii are excluded.

¹⁷ The concentration of migration among young adults is well known; see Donald J. Bogue, *Principles of Demography* (New York, 1969); P. Neal Ritchey, "Explanations of Migration," *Annual Review of Sociology*, 2, (1976), 363-404. From 1940 onwards, the census provides information on residence five years ago, and these data confirm that migration is concentrated among those in their twenties and thirties. For example, our analysis of IPUMS data shows that 60.6 percent of persons who migrated across state lines between 1935 and 1940 were between the ages of 20 and 39. The more limited statistics available for nineteenth century migration has also shown the twenties and thirties to be the ages with the highest proportion of migrants. See for example Curti, *The Making of an American Community*; Katz et al., "Migration and the Social Order in Erie County," 669-701; Dublin, "Rural-Urban Migrants in Industrial New England;" Steckel, "Household Migration and Rural Settlement."

¹⁸ As occupational choices open to women changed with industrialization and modernization, the migration differentials between men and women would decrease. See

Henry S. Shryock, Jr. and Hope Tisdale Eldridge, "Internal Migration in Peace and War," *American Sociological Review*, 12 (Feb. 1947), 27-39; Larry A. Sjaastad, "The Costs and Returns of Human Migration," *The Journal of Political Economy*, 70 (Oct. 1962), 80-93; Everett S. Lee, "A Theory of Migration," *Demography*, 3 (1966), 47-57; P. Neal Ritchey, "Explanations of Migration," *Annual Review of Sociology*, 2 (1976), 363-404; Steven H. Sandell, "Women and the Economics of Family Migration," *The Review of Economics and Statistics*, 59 (Nov. 1977), 406-414; Jacob Mincer, "Family Migration Decisions," *The Journal of Political Economy*, 86 (Oct. 1978), 749-773; Dov Friedlander and Eliahu Ben Moshe, "Occupation, Migration, Sex Ratios, and Nuptiality in Nineteenth Century English Communities: A Model of Relationships," *Demography*, 23 (Feb. 1986), 1-12; Franklin D. Wilson, "Aspects of Migration in an Advanced Industrial Society," *American Sociological Review*, 53 (Feb. 1988), 113-26.

¹⁹ The overall chronological pattern of migration is slightly different in Figures 5 through 8 than in Figures 2 and 3, since the migration flows statistics have not been standardized to control for changes in the size distribution of states; see note 16.

²⁰ The definitions of each type of destination vary slightly across censuses; see the IPUMS variable descriptions for FARM, URBAN, and METRO for a full discussion of these changes (<http://ipums.org>, accessed May 20, 2004). In the period from 1940 onward, not all destination types are available in all census years. Where information was not available, the destination of migrants was estimated through interpolation. As a result, however, the estimates shown for the 1940-2000 period should be regarded as approximations.

²¹ In 1870 and 1880, more black migrants are classified in rural nonfarm places than on farms, but the great majority were employed as agricultural laborers. It is probable that most of these people were in fact residing on plantations—often in the same quarters they had occupied before abolition—but the census does not provide sufficient information to classify their place of residence as a farm.

²² William H. Frey, “Black In-Migration, White Flight, and the Changing Economic Base of the Central City,” *American Journal of Sociology*, 85 (May 1980), 1396-1417. The list of publications using IPUMS data for analyses of migration out of the South is extensive and includes: James N. Gregory, “The Southern Diaspora and the Urban

Dispossessed: Demonstrating the Census Public Use Microdata Samples,” *Journal of American History*, 82 (June 1995), 111-134; Stewart E. Tolnay, “Migration Experience and Family Patterns in the ‘Promised Land’” *Journal of Family History* 23 (1998), 68-89; Thomas N. Maloney, “Migration and economic opportunity in the 1910s: New evidence on African-American occupational mobility in the North.” *Explorations in Economic History* 38 (2001), 147-65; Trent Alexander, “Great Migrations: Race and Community in the Southern Exodus, 1920-70.” (Ph.D. diss., Carnegie Mellon University, 2001); Jason Digman, “Which Way to the Promised Land? Changing Patterns in Southern Migration, 1865 to 1920,” (Ph.D. diss., University of Illinois at Chicago, 2001).

²³ White collar workers include those occupations classified as professional, technical, managerial, clerical, and sales in the 1950 U.S. Census Bureau classification, except for hucksters, peddlers, and newsboys, which are classified as unskilled. Skilled occupations are craftsmen, artisans, and operatives, and unskilled occupations are service workers and laborers.

²⁴ Murray Kane, “Some Considerations on the Safety Valve Doctrine,” *Mississippi Valley Historical Review*, 23 (Sep. 1936), 169-188; Clarence H. Danhof,

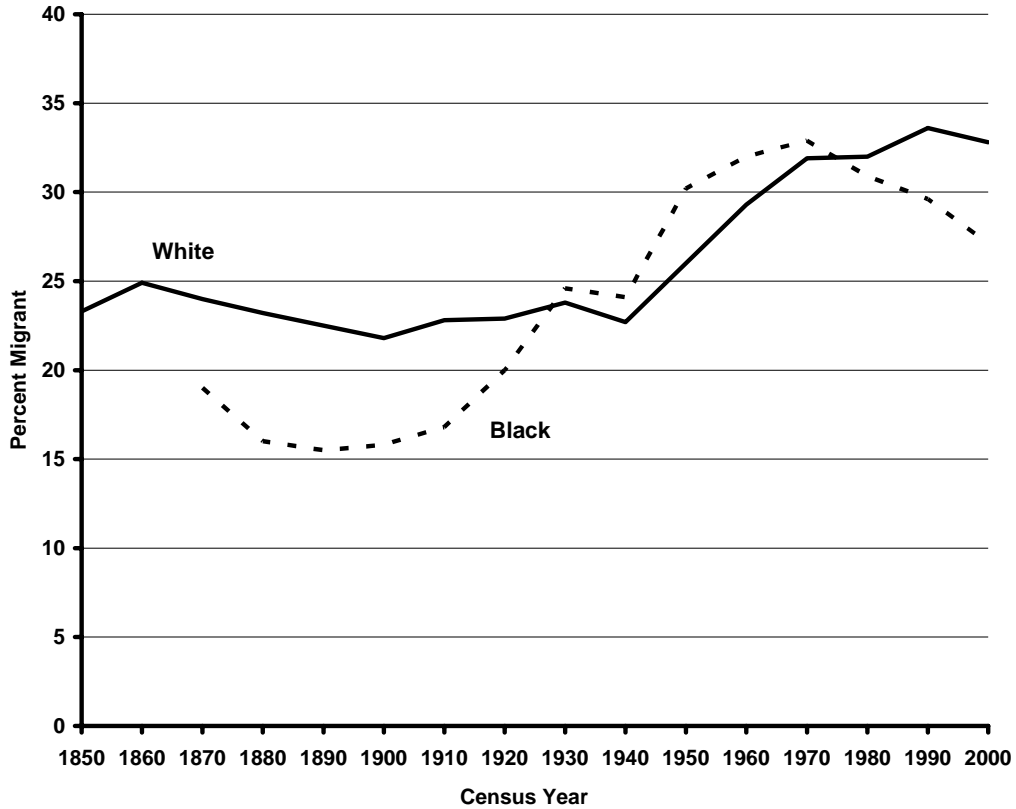
“Economic Validity of the Safety-Valve Doctrine,” *Journal of Economic History*, 1, Supplement: The Tasks of Economic History (Dec. 1941), 96-106.

²⁵ Larry H. Long, “Migration Differentials by Education and Occupation: Trends and Variations” *Demography*, 10 (May 1973), 243-258; Bogue, *Principles of Demography*; Stanley Lieberson, “Selective Migration from the South: A Historical View,” in *The Demography of Racial and Ethnic Groups*, ed. Frank D. Bean and W. Parker Frisbie (New York, 1978), 119-141; Stewart E. Tolnay, “Educational Selection in the Migration of Southern Blacks, 1880-1990,” *Social Forces*, 77 (Dec. 1998), 487-514; Stewart E. Tolnay, “The Great Migration Gets Underway: A Comparison of Black Southern Migrants and Nonmigrants in the North, 1920,” *Social Science Quarterly*, 82 (June 2001) 235-252.

²⁶ Joseph P. Ferrie, “Migration to the Frontier in Mid-Nineteenth Century America: A Reexamination of Turner’s ‘Safety Valve’,” paper presented at the World Congress of Cliometrics, Munich (Germany), July 1997; Ferrie, “Longitudinal Data for the Analysis of Mobility in the U.S., 1850-1930,” paper presented at the International Microdata Access Group, Montreal, Nov. 10-11, 2003. Building on Ferrie’s work, Steven

Ruggles is developing a series of large-scale representative samples of linked nineteenth-century censuses, which will provide a valuable tool for investigating these issues further; see Ruggles, “Linking Historical Censuses: A New Approach,” paper presented at the International Microdata Access Group, Montreal, Nov. 10-11, 2003. The Ferrie and Ruggles conference papers are available at <http://ipums.org>, accessed May 20, 2004.

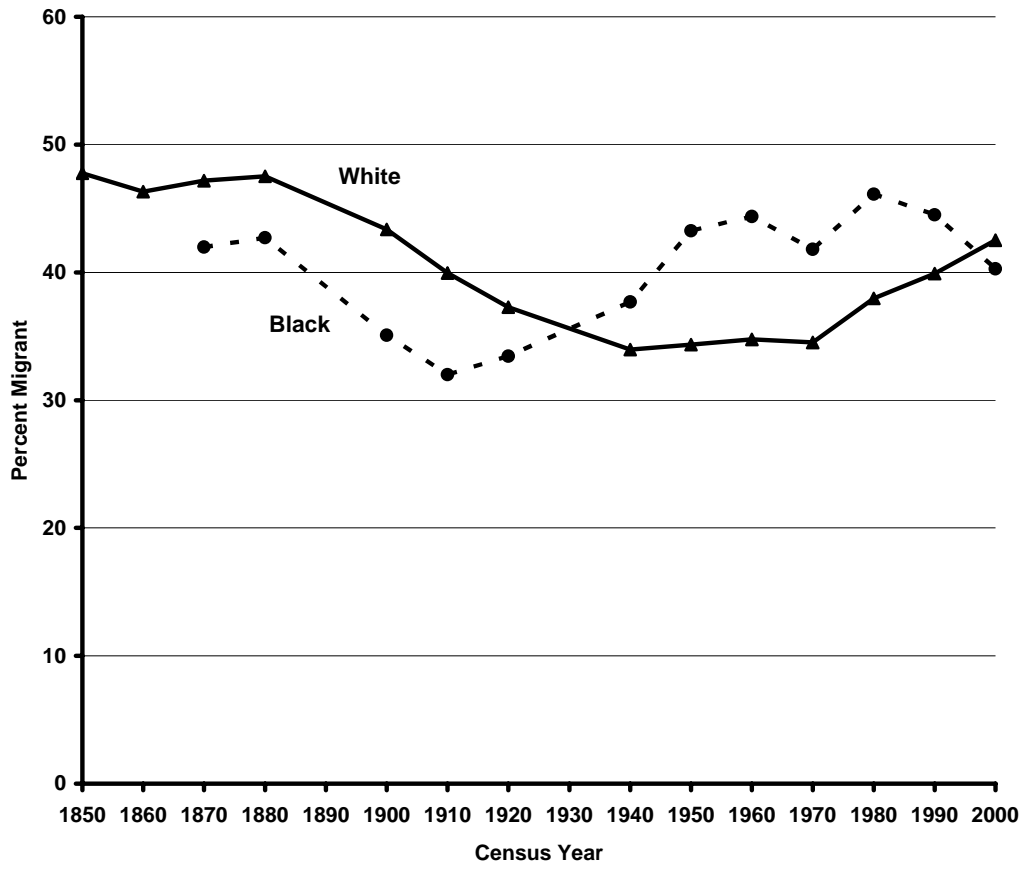
Figure 1. Percent of Native Population Residing Outside State of Birth by Race, United States, 1850-1990



Sources:

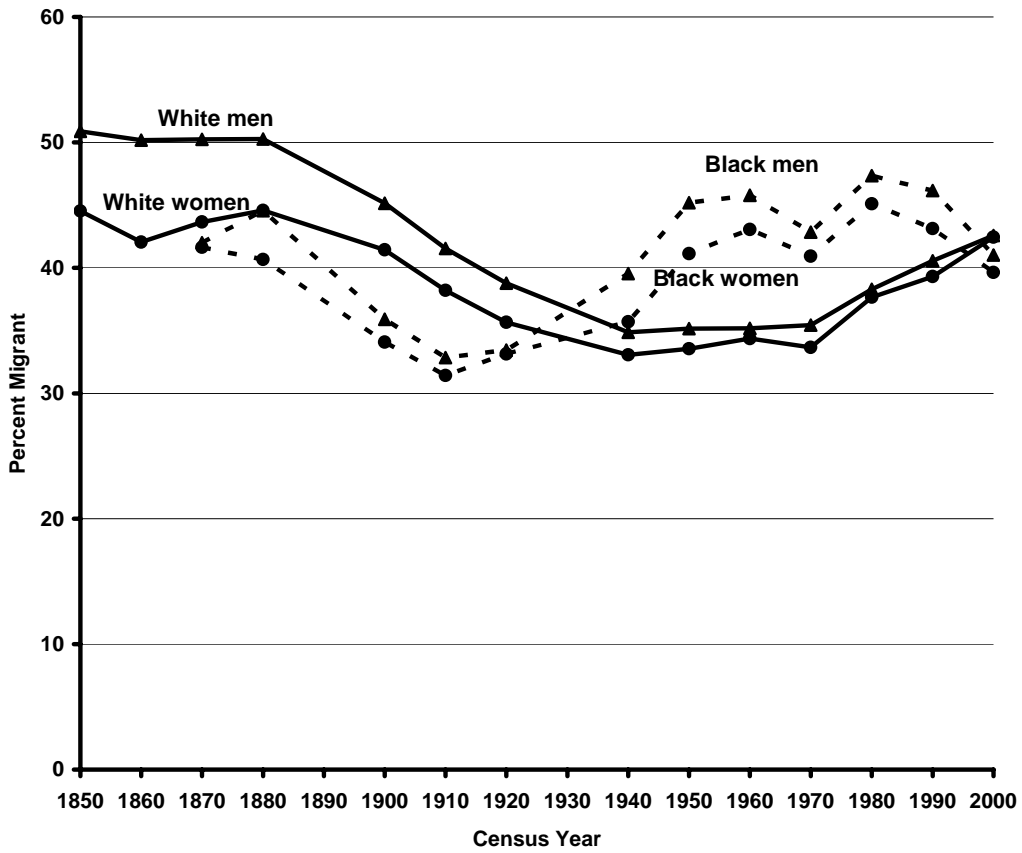
U.S. Bureau of the Census, Historical Statistics of the United States, Bicentennial Edition, Colonial Times to 1970, Part 1. Washington, DC: 1975, Series C 1-14, p. 89; U.S. Bureau of the Census, 1980 Census of Population, Characteristics of the Population, PC80-1-C1 General Social and Economic Characteristics, Part 1, United States Summary, PC80-1-C1, Washington, DC: 1983, Table 78, p. 1-16; U.S. Bureau of the Census, 1990 Census of Population, Social and Economic Characteristics, United States, Washington, DC: 1993, Tables 6 and 7, p. 6-7; U.S. Bureau of the Census, Census 2000 Summary File 4, DP-2. Profile of Selected Social Characteristics: 2000, accessed at <http://www.census.gov> on May 17, 2004.

Figure 2. Percent of Native Born Migrant at Ages 50-59 by Race: United States, 1850-2000



Source: Integrated Public Use Microdata Series
Note: Standardized to control for size of birth state (see note 16)

Figure 3. Percent of Native Born Migrant at Ages 50-59 by Sex and Race: United States, 1850-2000

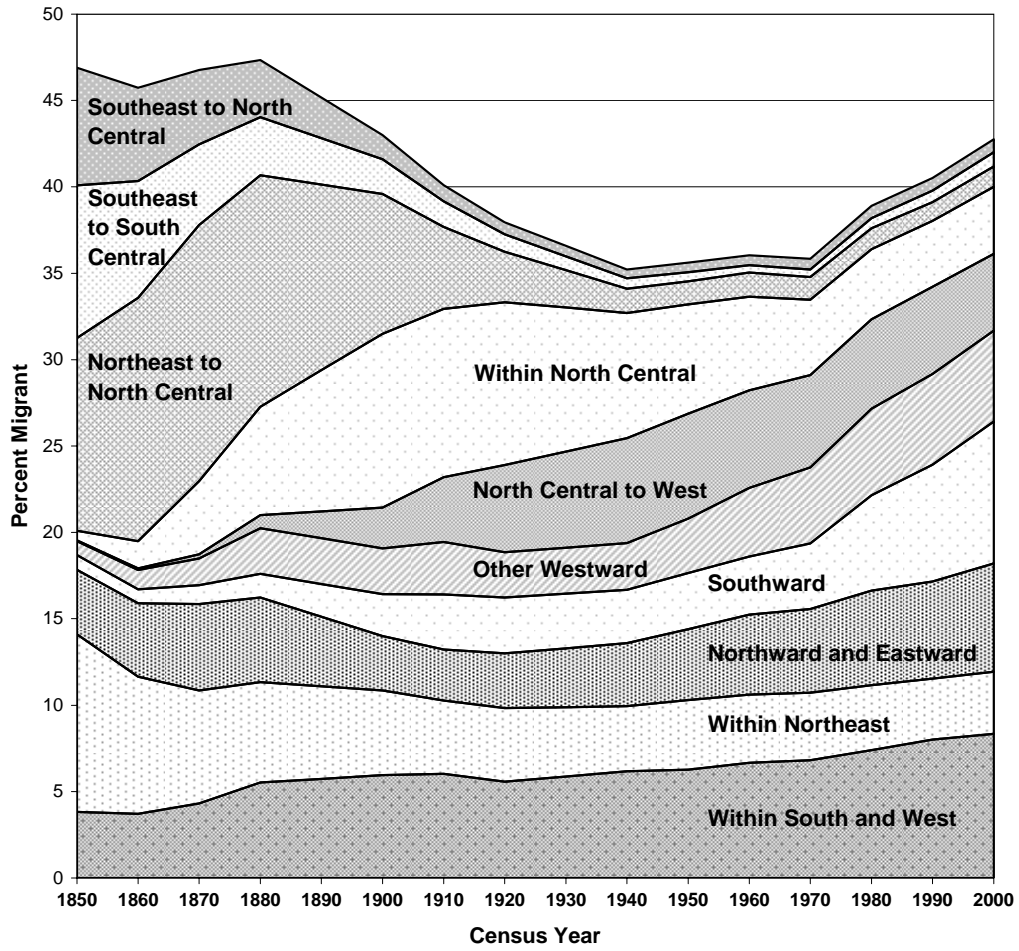


Source: Integrated Public Use Microdata Series
 Note: Standardized to control for size of birth state (see note 16)

Figure 4. Regions Used for Analysis of Migration Flows

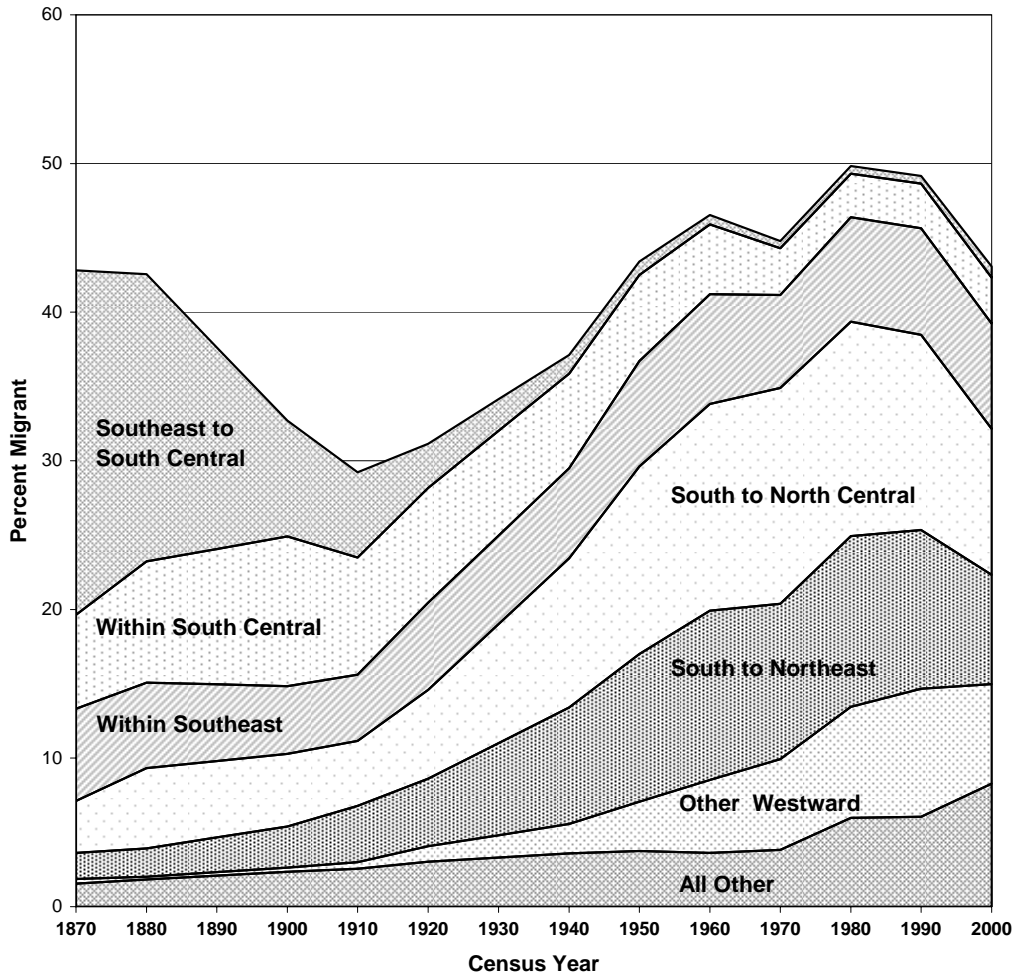


Figure 5. Interstate Migration Flows for Native-Born Whites Aged 50-59: United States 1850-2000



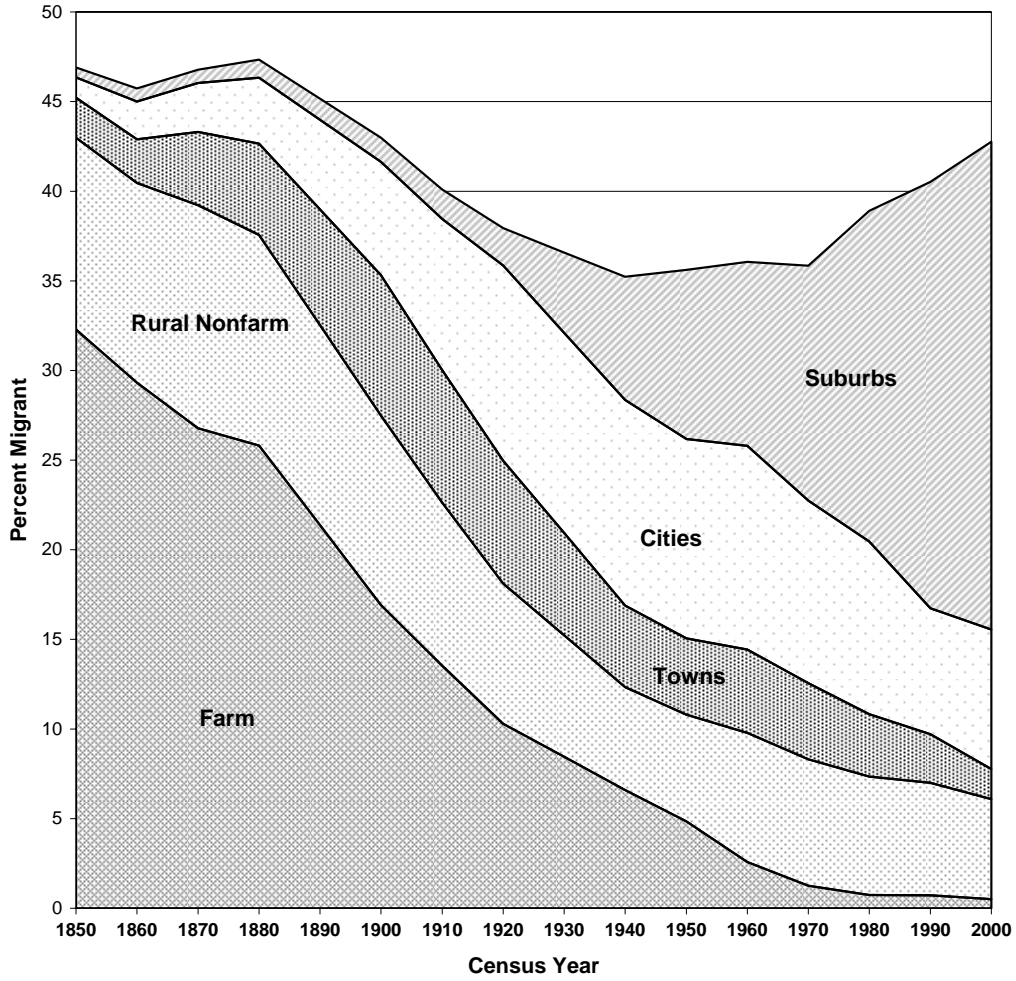
Source: Integrated Public Use Microdata Series

Figure 6. Interstate Migration Flows for Native-Born Blacks Aged 50-59: United States 1870-2000



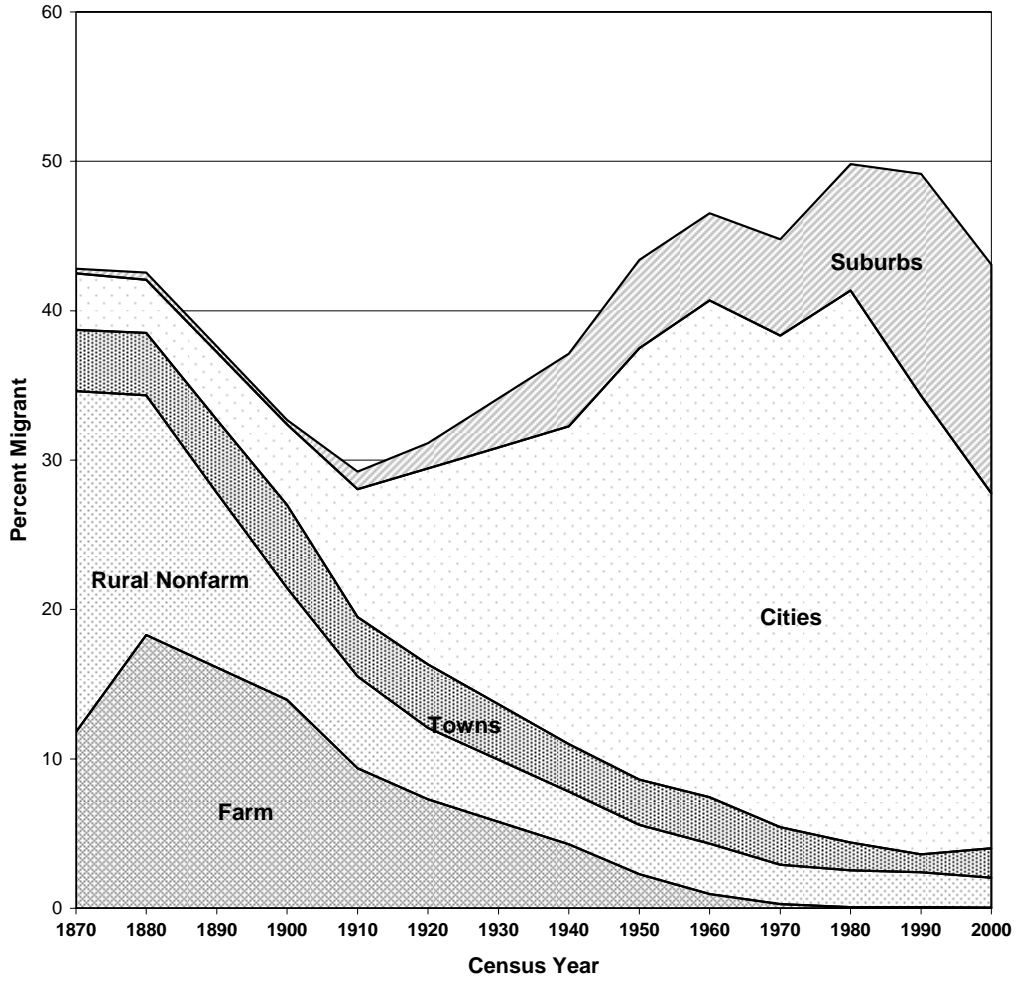
Source: Integrated Public Use Microdata Series

Figure 7. Interstate Migration Destinations for Native-Born Whites Aged 50-59: United States 1850-2000



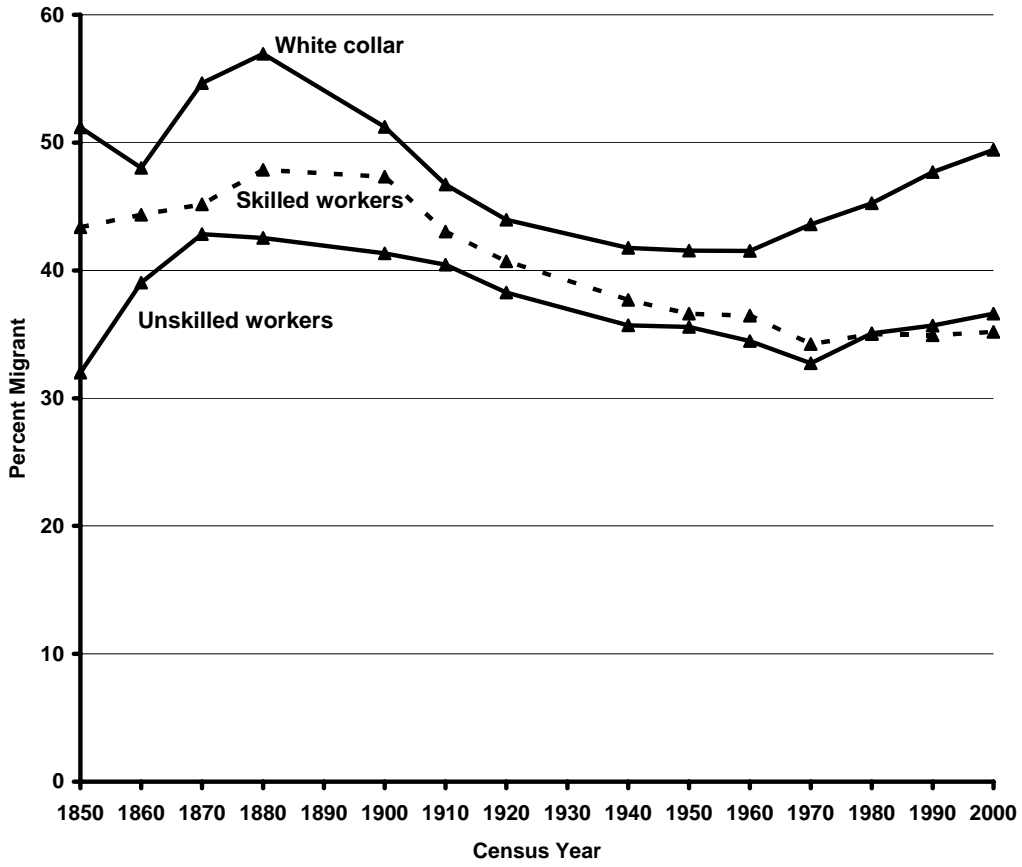
Source: Integrated Public Use Microdata Series

Figure 8. Interstate Migration Destinations for Native-Born Blacks Aged 50-59: United States 1870-2000



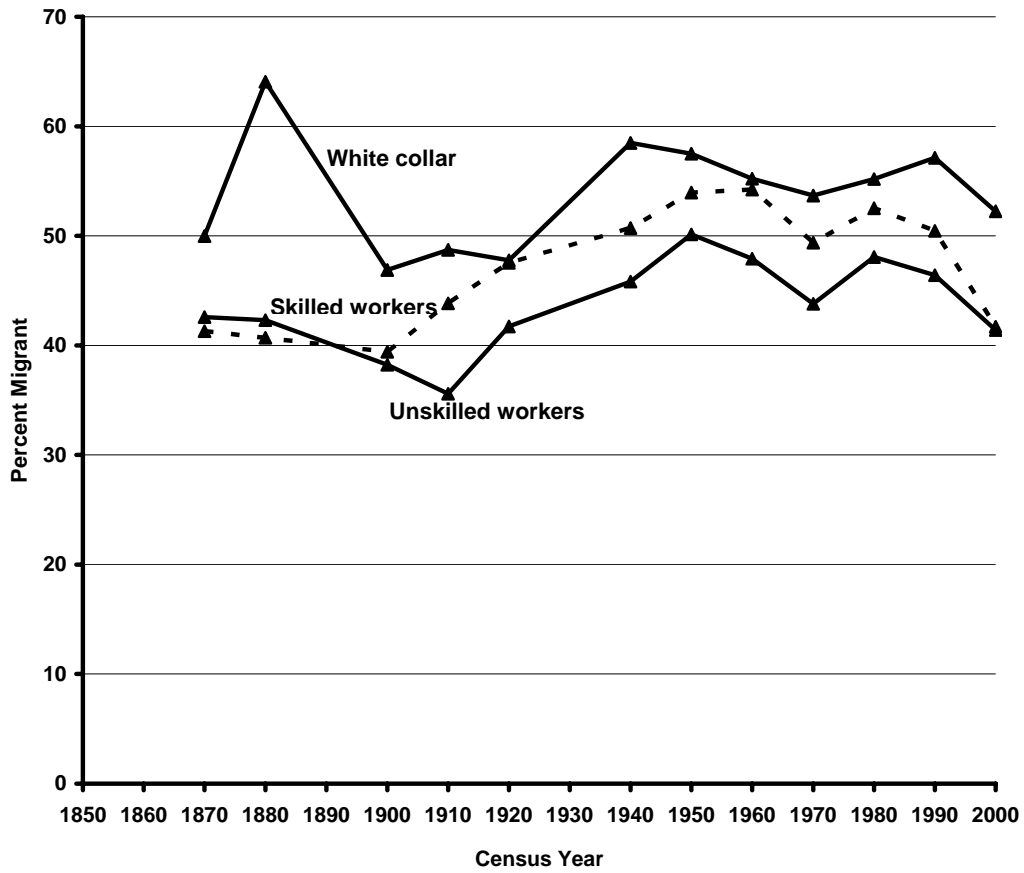
Source: Integrated Public Use Microdata Series

Figure 9. Percent of Native-Born Employed White Males Migrant at Ages 50-59, by Occupation: United States, 1850-2000



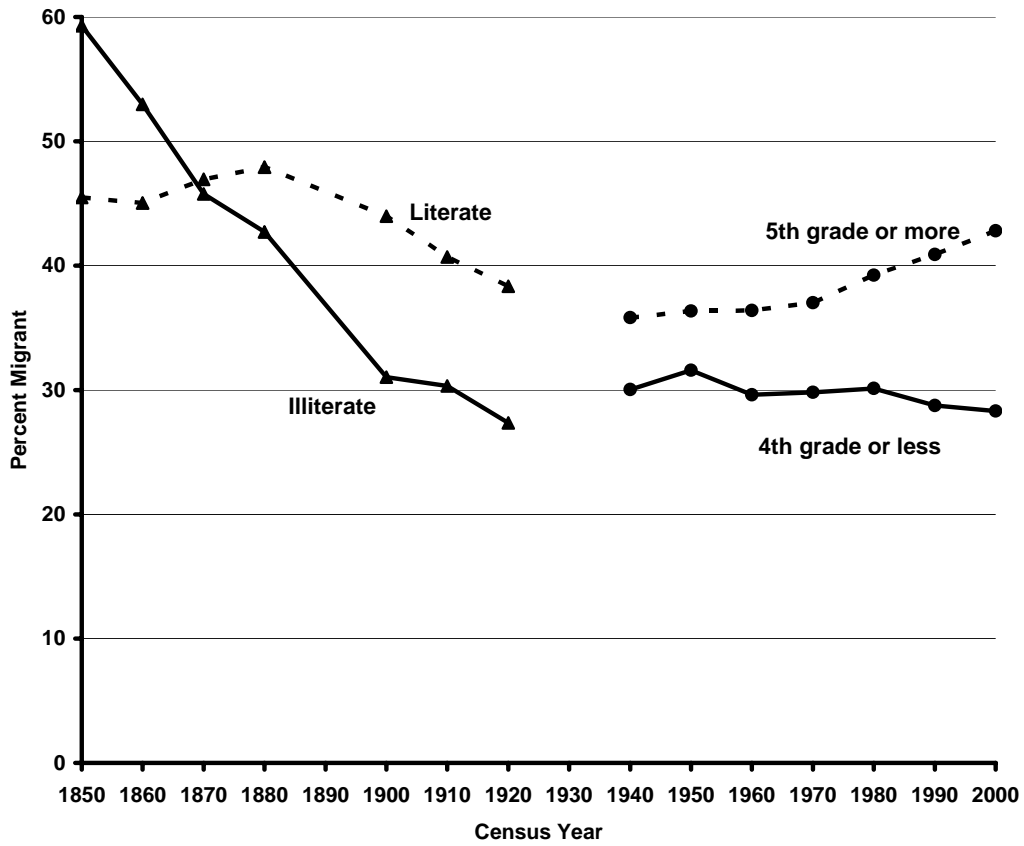
Source: Integrated Public Use Microdata Series
 Note: Farmers excluded

Figure 10. Percent of Native-Born Employed Black Males Migrant at Ages 50-59, by Occupation: United States, 1870-2000



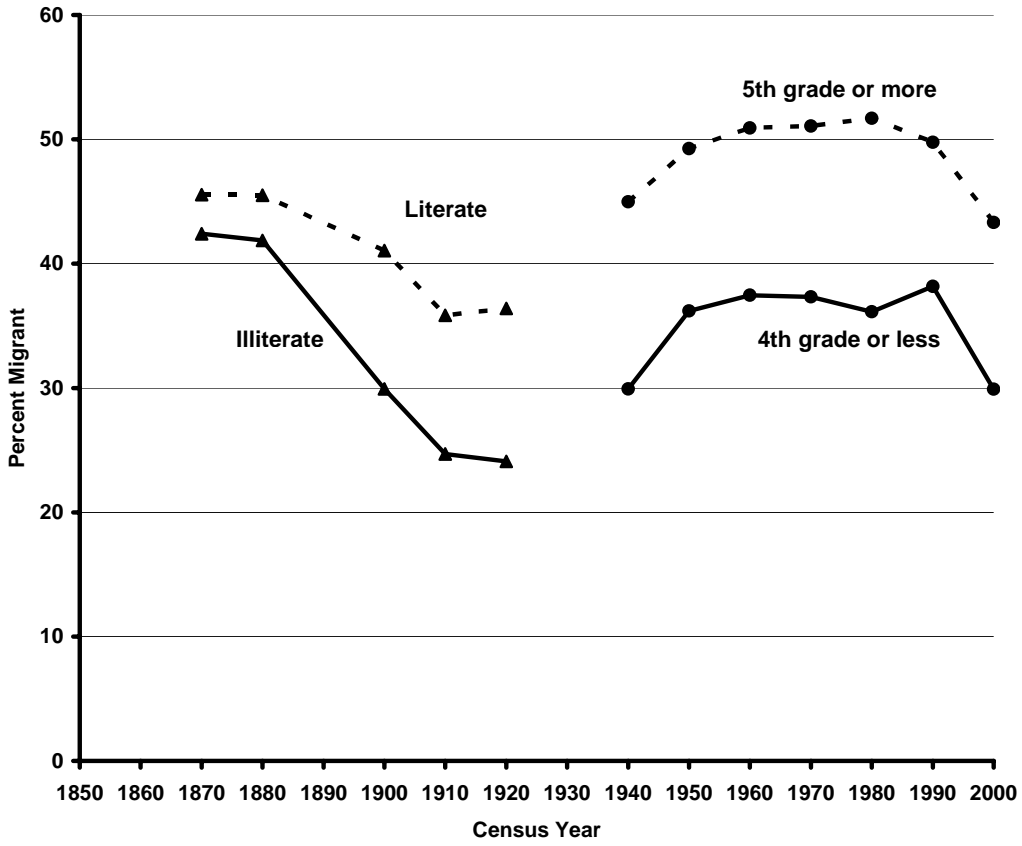
Source: Integrated Public Use Microdata Series
 Note: Farmers excluded

Figure 11. Percent of Native Born Whites Migrant at Ages 50-59 by Literacy and Educational Attainment: United States, 1850-2000



Source: Integrated Public Use Microdata Series

Figure 12. Percent of Native Born Blacks Migrant at Ages 50-59 by Literacy and Educational Attainment: United States, 1870-2000



Source: Integrated Public Use Microdata Series