Where Did They Go? Analysis of Out-Migration from Mammoth Cave National Park, 1920-1940

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WHERE DID THEY GO? ANALYSIS OF OUT-MIGRATION FROM MAMMOTH CAVE NATIONAL PARK, 1920-1940

A Thesis
Presented to
The Faculty of the Department of Geography and Geology
Western Kentucky University
Bowling Green, Kentucky

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Master of Science

By
Collins U. Eke

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WHERE DID THEY GO? ANALYSIS OF OUT-MIGRATION FROM MAMMOTH CAVE NATIONAL PARK, 1920 -1940

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I dedicate this thesis to my loving family, whose unconditional love and support motivated me every day, and who never gave up on me when times were difficult. I also dedicate this thesis to the memory of my uncle, Chuck, who left us far too soon.
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Table 5.10. Results of proportions test for unsuccessfully tracked residents based on race (a) and home ownership (b) ........................................................................................................................................71
The 52,830-acre Mammoth Cave National Park, located in the karst region of south-central Kentucky, was formally established in July of 1941, culminating nearly three decades of park creation that displaced several thousand residents of the region. This thesis sampled residents using the 1920 manuscript census for the United States Census of Population and Housing and tracked their migration destinations using the 1930 and 1940 manuscript censuses. Migration patterns for the entire sample, as well as by race and homeownership status, were identified through mapping. Out-migrants generally chose locations north, west, and east of the proposed park area, noticeably neglecting the Deep South. Statistical analyses proved significant differences between proportions of Black out-migrants and White out-migrants moving to urban areas, as well as those of homeowners and renters who were not successfully tracked during analysis. The research underlines unintended consequences of the forced out-migration from the proposed Mammoth Cave National Park and several factors that contributed to it. In the process, the thesis fills a gap in research on Mammoth Cave National Park and sheds light on an important aspect of Kentucky’s history.
CHAPTER ONE: INTRODUCTION

For two centuries, thousands of people made their homes in an area that later became Mammoth Cave National Park. This research analyzes the out-migration of residents after the park’s authorization in May 1926. The 52,830-acre national park, located in the karst region of south-central Kentucky, was the 23rd park created in the United States (Kaiser 2008). Mammoth Cave is the largest of the area’s many caves, which were formed when soluble rocks were dissolved, creating a topography called karst. Mammoth Cave National Park is situated approximately ninety miles south of Louisville, Kentucky, and an equal distance north of Nashville, Tennessee. Park creation involved the assembly of thousands of acres of farmland and forest (Kaiser 2008). Most of the land purchases and out-migration happened between 1926 and 1940, and upon the purchase of 48,000 acres, the Mammoth Cave area was declared a national park on July 1, 1941.

This thesis details the out-migration of the Mammoth Cave area’s pre-park residents over a twenty-year period from 1920 to 1940. During this time, land parcels were purchased from residents of the area and reserved for the national park. Residents gave up their homes and property and relocated to areas beyond the park boundary. Such forced migration was not uncommon during national park creation in the early twentieth century. During this period, there was a broad shift in the paradigm of national parks which made the dispossession of lands a common occurrence (Kantor 2007). Unlike western parks, which were created using government-owned land, parks in the east were created using privately-owned land. Any residents were subject to dispossession. The main purpose of this thesis is to track migration destinations of those dislocated by the
creation of Mammoth Cave National Park. The research also investigates migrants’
choices of rural versus urban destinations and tests whether there was a significant
difference in destination type by race and socioeconomic status.

The intent behind the change in landownership from private to public was to set
aside acreage above Mammoth Cave to help preserve the cave’s natural environment for
recreation and scenic enjoyment. Once purchased by the authorized state-level agency,
land parcels in the proposed park area were eventually turned over to the federal
government. Thousands of acres of farmland were converted to national park land by
removing fences and constructing roads and trails (Kaiser 2008). Buildings such as
private homes, one-room school houses, and churches were also removed in order to
recreate expanses of wilderness. Today, the most visible remains of human habitation in
Mammoth Cave National Park are a few cemeteries, three churches, foundations of a few
buildings, and some water wells (Noble 1991).

This thesis builds on the research of Matthew Brunt (2009), who identified
residents of the Mammoth Cave pre-park communities using the 1920 manuscript census
and matched census households to known locations of houses within the proposed park
boundary. Household-house pairings permitted identification of many individuals who
resided in the Mammoth Cave area (Brunt 2009). A sample of individuals was taken, and
their locations as of the 1930 and 1940 censuses was sought. Migration destinations were
classified as urban or rural based on a population threshold. Race and home ownership
was also extracted from the census to determine if there was a significant difference in
the migrants’ destinations based on these socioeconomic factors. The analysis tested
whether Blacks and Whites moved in equal proportions to urban and rural areas. A
similar test compared individuals in owner-occupied houses to those in rental housing. Blacks were expected to favor urban areas more than Whites, and renters were expected to favor urban areas more than homeowners, primarily because of the both groups were socially and economically disadvantaged at the time. Finally, the research analyzed how often members of each subgroup moved during this period as a surrogate measure of socioeconomic stability.

This research is significant for three reasons. First, it seeks to expand our understanding of an important aspect of the cultural geography and history of Mammoth Cave National Park. Uprooted residents experienced significant social and economic strains that were compounded by widespread hardships, such as racial upheaval, declining income, and joblessness, precipitated by the Great Depression (Trotter 1995). Little research addresses the pre-park communities of the Mammoth Cave region, and no published scholarship addresses where pre-park populations went after displacement. Second, this research fills a gap in the study of a major mass migration in United States history, the Great Migration. Out-migration from the proposed Mammoth Cave National Park largely occurred during the 1930s, which was a lull in two active phases of the Great Migration. Few scholars have studied the smaller-scale migration that continued during this lull. Finally, the displacement of an entire community within a relatively short period presents an opportunity to study the social dynamics of regional migration. Statistical analyses with respect to race and socioeconomic class provide perspectives on social justice, or lack thereof, in the out-migration experience (Algeo 2012).
CHAPTER TWO: LITERATURE REVIEW

Perceptions of the natural landscape in North America have shifted since the earliest days of European settlement, reflecting changing religious and secular ideologies, economic exploitation, and varying levels of ethnic cooperation and conflict (Stankey 1989; Nash 2001). Early colonists in North America were influenced by religious dogmas that dominated European society for centuries (Stankey 1989). The Puritans of the Massachusetts Bay Colony, for example, were strongly influenced by biblical tradition. Writings of Puritan leaders portrayed wilderness as evil, as harboring dangerous creatures and men, and as a landscape in need of transformation to a place where their society could be perfected. For many, this was sufficient justification to hate wilderness (Nash 2001). Other colonists viewed wilderness as a place of refuge where they could escape what they viewed as “corrupt civilization” (Stankey 1989, 17). Whether settlers were motivated by religious views or had a more purely economic and utilitarian outlook, their actions, taken to survive and prosper in the new land, had similar effects (Atkins 2012). Settlers cut down forests and drained swamps, bogs, and marshes, transforming them into usable land. This practice reduced forested land in what would become the United States from 46% of land cover in 1630 to 34% by 1910 (Oswalt and Smith 2014).

In response to massive accumulated landscape change, a movement for wilderness conservation gained momentum starting in the nineteenth century. American wilderness, once believed to be widespread and incapable of exhaustion, was disappearing at an increasing pace. Noted philosophers, naturalists, politicians, philanthropists, and entrepreneurs pushed for its preservation (Campbell 1969; Spence 1999; Nash 2001). Philosopher Henry David Thoreau, for example, stated that man must
be considered part of nature and that wilderness would lead to the world’s preservation by awaking people to the need to take action to ensure that it continued to exist (Thoreau 2000). Another preservation advocate, landscape architect Frederick Law Olmsted, traveled to the Yosemite Valley of California in 1863 and argued the virtues of preservation, using Mariposa Grove as an example (Olmsted 1865). As chairman of the Yosemite Commission, Olmsted had an idealistic view of how the landscape should be used, with the principal rationale for preservation being public enjoyment as a state park (Diamant 2014). Moreover, Olmsted argued that the price of admission to such a park must be fair and affordable. Thoreau, Olmsted, and others believed that America’s natural wonders should be protected for everyone’s use rather than reserved for the few or exploited for personal gain (Runte 2010).

Shifts in the perception of wilderness and nature also shaped environmental policies (Flad 2009). The creation of national parks and other protected areas were intended to preserve wilderness and keep them in a natural state for public enjoyment (Nelson and Vucetich 2013). National parks and other protected areas were an expression of human values, created to promote outdoor recreation as a public good, provide jobs, protect river headwaters and the cores of vital functioning ecosystems, promote economic development, and assuage citizens’ physical and mental health (Dennis 1999; Nelson and Vucetich 2013; Stolton et al. 2015). Economic benefits accrued to businesses involved with park tourism. Railroad companies, for example, played a significant role in the 1872 establishment of Yellowstone, the first national park. The Great Northern Railroad operated a line to the park, branch lines inside the park, and the Many Glaciers Hotel,
increasing profits by providing a suite of tourism services (Butler 2005; MacDonald 1996).

Around the turn of the twentieth century, as more national parks were created, the need for a park bureau to manage wilderness preservation became evident. Under the Antiquities Act of 1906, President Theodore Roosevelt declared eighteen places of historical and scientific significance to be national monuments, creating further incentive for such a bureau. Proponents contended that a dedicated administrative organization would make it easier for the federal government to maintain and regulate these areas and facilitate economic growth near the parks (Runte 2010). The United States Congress passed the Organic Act of 1916, which created the National Park Service when President Woodrow Wilson signed it into law on August 25 (Runte 2010). The Organic Act instituted two fundamental principles for the Park Service -- that natural areas must be left untouched, and they must be used for the enjoyment of the public. It was left to the National Park Service to find an appropriate balance between these often conflicting goals, a balance that was difficult to obtain (Lowry 2009). The National Park Service operated under the direction of the Secretary of the Interior, managing all national parks through uniform policies. Previously, parks were separate entities with individual management systems. National Park Service officials managed each national park in accordance to national standards and fundamental goals, although various interpretations of the overall objectives caused a degree of diversity in their practices (Lowry 2009).
Migration

The creation and evolution of the national park system caused human displacement with major socioeconomic implications. People who lived on land slated to become part of a national park were forced to move by organizations responsible for land acquisition and by state governments backing those organizations’ authority. For Mammoth Cave, Shenandoah, and Great Smoky Mountains National Parks, this out-migration occurred at the same time as the Great Depression and the Dust Bowl, both of which forced tens of thousands of families to migrate in search of jobs and new homes (Gregory 1989). Government-created migration on top of natural disaster and economic collapse contributed to widespread joblessness, hunger, and financial hardship. Migration is considered to be “a major cause of social change,” although it has varying impacts on different socioeconomic groups (Lewis 1982, 220). During the 20th century, approximately 28 million people migrated from the South and Midwest to the North and West (Gregory 2005). Migration creates changes in political, economic, and cultural characteristics of places (Wilson 2005). For example, Southern migrants spread elements of culture, transforming northern Protestantism, popular music, and politics (Gregory 2005). These changes were not limited to expansion diffusion of regional cultures, but also set the stage for a significant modulation of the national culture with the creation of Mammoth Cave, Shenandoah, and the Great Smoky Mountains National Parks.

Migrants often select destinations based on physical and socioeconomic characteristics of place. Multiple studies have found four key economic variables about place factor into a migrant’s decision-making process – personal income after moving, cost of living, unemployment rates, and employment opportunities (Cadwallader 1989).
Using data from 1979 through 1994 for the entire U.S. from the National Longitudinal Survey of Youth, Kennan and Walker (2011) also found these to be the main economic factors in migrants’ decisions but added a fifth factor, moving costs. Based on the Survey of Income and Program Participation, Hernández-Murillo et al. (2011) found that people who plan to migrate consider indicators such as possible earnings, relocation costs, and the required time for job searches at candidate destinations.

Recreational opportunities, population density, and climatic attractiveness also influence migration decisions (Cadwallader 1989). Features such as mountain ranges, pastoral farmland, and shorelines largely appeal to emotional desires and tend to be less important in the decision-making process than socioeconomic characteristics, such as employment opportunities, wages, and living conditions that factor into the practicality of a migration decision. These and other factors, such as prior knowledge of a particular area, influence decisions on where to move. The literature on decision-making is useful for interpreting out-migration from the Mammoth Cave area by suggesting key characteristics of destinations and factors in migrants’ decisions.

Perceived quality of life in a destination will affect that place’s pull on migrants. Herzog and Schlottman (1986) and Whisler et al. (2008) used Places Rated Almanac to study quality-of-life factors in the migration decision. Both concluded that housing costs, recreation, and crime in potential destinations are significant factors in the decision to migrate. Although these two studies have similar results, they differ on the influence of the economy of source locations. Whisler et al. (2008) concluded that poor economic climate of a source location contributes to out-migration, while Herzog and Schlottman concluded that a poor economic climate limits out-migration. In spite of this conflicting
outcome, both studies underlined the importance of economic factors in migration decisions.

Human capital is also a factor in people’s migration decisions, as job-seeking migrants with more skills are more likely to move and find new jobs (Price 1971; Korpi and Clark 2017). The human capital theory of migration states that migrants’ decisions are centered on the vitality of labor markets in new destinations with respect to skills-based income potential (Sjaastad 1962; Hernández-Murillo et al. 2011; Korpi and Clark 2017). Human capital entails specific job skills, as well as other intangible resources that help individuals excel in the workforce. Workers with different levels of human capital vary in how they approach economic opportunities after moving from a place. For example, workers who are college graduates respond more to opportunities in distant labor markets than non-college graduates (Wozniak 2010). In the larger picture of education-based migration, Hernández-Murillo (2011) concluded that more high school dropouts remain in their place of origin, and college graduates are more likely to migrate than remain in their hometowns.

Migration studies involve analyses of locations (e.g. source and destination regions), linkages between regions (e.g. chain migration), factors that contribute to migration, and types of migration. Internal migration is recognized as movement within a polity and is an important source of regional demographic change as well as an indicator of changes in economic growth (Borjas et al. 1992). Internal migration at the national level is considered to be the main factor behind a majority of the global population living in urban areas (Curiel et al. 2018). For much of the twentieth century, the United States had one of the highest levels of internal migration in the world, but this trend reached its
zenith around 1980 and internal migration in the U.S. has declined steadily since then (Molloy et al. 2011). In the late twentieth century, approximately 3% of the U.S. population moved between states each year, and about 10% within a five-year period (Borjas et al. 1992).

Return migration involves migrants returning to their source region and is widespread but largely inconspicuous. Approximately one-quarter of all moves and one-third of all repeat moves are considered to be return moves (DaVanzo and Morrison 1981). Many return moves go unnoticed because they tend to immediately follow an initial move (DaVanzo and Morrison 1981). A migrant’s inability to find employment in a new location, often stemming from inadequate education, is a principal push factor in return migration, while connections to family members still living there act as a pull factor. However, this repeat movement is less likely with the passage of time. Return migration is part of larger-scale migrations and is especially relevant in the Mammoth Cave park context because of the long histories some families have to the area and the deep attachments they feel for it.

Race affects return migration. During the early 1900s, Blacks moved out of the South in a movement known as the Great Migration. The Great Migration came in two phases. The First Great Migration occurred from 1910 to 1930, and the Second Great Migration occurred from 1940 until about 1970. The Great Depression accounts for the ten-year gap between the two periods and explains a brief wane in Black migration (Collins and Wanamaker 2011). More than eight million Black out-migrants moved north during the Great Migration, most to cities (Morehouse 2009). Two of the most popular destinations were New York City and Cleveland, Ohio. By 1930, over 260,000 Blacks
relocated to New York City. These Southern out-migrants ultimately made up about 57% of the city’s Black population. Cleveland took in over 59,000 southern Black out-migrants, nearly doubling the city’s Black population (Gregory 2009). Out-migration from the proposed Mammoth Cave National Park occurred mostly from 1930 to 1940, during a lull between the two phases of the Great Migration and represents a counter to the national trend. Prior to the Great Migration, more than 90% of the U.S. Black population lived in the rural South, but by 1970 that figure had dropped to 53% (Wilson 2005; Collins and Wanamaker 2011). In the 1970s and 1980s, Blacks started returning to non-urban areas of the South (Falk et al. 2004). By the 1990s, the rural South had regained more than a half million Blacks from the urban North, increasing the Black population in the South 10% during that decade (Stack 1996; Falk et al. 2004). This reversal of Blacks’ northward migration was dubbed the Great Reverse Migration, or the New Great Migration (Tolnay 2003). During this period, although Blacks were less likely to migrate than Whites, they were more likely to be return migrants (Wilson 2005).

Black migrants to cities were often subsequently intra-city migrants, migrating to another part of the same city. Most intra-city migrants were non-homeowners, including renters, young adults, and people in the middle or lower class. Most southern Black out-migrants fell into these categories. They moved to cities even though living conditions in Black neighborhoods were often unhealthy, a situation that sparked intra-city migration. Eriksson and Niemesh (2016) found that by 1920, Black urban neighborhoods had deteriorated, with many having high housing densities and mortality rates, and lacking adequate infrastructure, such as water and sewer systems, all push factors for further migration.
Ravenstein (1885) laid the groundwork for migration studies by advancing eight theories of migration, generalizing his observations of migration trends in the late nineteenth century United Kingdom. Three of his “laws” are relevant to the situation at Mammoth Cave National Park. Ravenstein held that most migrants move short distances, which was typical of the rural-urban migration prevalent during his lifetime. He also observed that destinations with larger populations attracted more people, ideas, goods, and commodities than destinations with smaller populations, and migrants who moved longer distances usually went to industrial centers. Although Ravenstein did not analyze motivations, jobs were a likely pull factor for these migrants. Finally, Ravenstein found that rural residents were more likely to migrate than urban or small-town residents, another trend typical of regions experiencing rural-urban migration associated with industrialization.

Torsten Hägerstrand (1957) was one of the first geographers to develop a formal mathematical model of the relationship between migration and the distance between two locations. Although Hägerstrand was best known for his work with time-geography and cultural diffusion, he also studied migration. Hägerstrand’s focus was primarily on the expression, through tables, models, and maps, of the spatial aspects of people’s decisions to migrate, particularly their choice of destinations (Hägerstrand 1957; Lemercier and Rosental 2009). The gravity model of migration is a mathematical and statistical model that illustrates spatial interactions and migrant flow patterns. The gravity model is used to model movement of migrants between two locales. Migrant flow between two places is proportional to the product of their populations and is inversely proportional to the distance between them. Thus, cities with larger populations attract more migrants. This
model is analogous with Sir Isaac Newton’s laws of gravitational force. The populations of cities are also a factor in the “gravitational pull” of cities; the gravity model of migration postulates that larger-populated cities attract more migrants. However, there are instances in which smaller cities attract more migrants in spite of distance (Curiel et al. 2018). Waldo Tobler (1970) refined earlier models of migration by focusing on the concept of distance decay – human interaction with place decreases with distance. One of Tobler’s methods involved “rose” diagrams of migration based on population samples for two consecutive census years. (Tobler 1970; Tobler 1979). The “rose” was created from a set of lines, each representing the direction and distance travelled by a single migrant (Tobler 1979). Actual migration source and destination locations are not represented by this graph. The resulting rose allows comparison of relative distances and migration directions within the set of migrants. Thanks in large part to Tobler’s emphasis, distance decay has become “a fundamental principle in spatial interaction” as reflected by its nickname, the First Law of Geography (Wright and Ellis 2015, 12).

Samuel Stouffer’s (1940) intervening opportunities hypothesis proposes that the chances of migration have less to do with distance and more to do with the opportunities in a given destination. Migrants might be persuaded to take advantage of intervening opportunities in places that are closer to home instead of continuing to an intended destination. The theory undercuts distance decay’s premise of a regular relationship between distance and migration when intervening opportunities at closer destinations exert disproportionate pull, dissuading migrants from continuing to more distant, larger destinations.
Quality of life also contributes to people’s decisions to migrate. Quality of life encompasses many characteristics, such as physical wellness, education, wealth, job prospects, and the environment, which contribute to a person’s physical, mental, emotional, and social health. Places with a high quality of life possess positive characteristics such as pastoral scenery, a healthy environment, low crime, and educational opportunities, all of which are pull factors for migrants. Migrants must be willing and able to pay higher housing and labor prices to live in areas with a higher quality of life (Berger and Blomquist 1992).

During the 1920s and 1930s quality of life differed greatly between urban and rural areas of the United States. Many rural areas, particularly in the South and Appalachia, were impoverished and underdeveloped, while metropolitan areas were perceived as offering higher quality of life (Walls and Billings 1977). As a result, many people migrated from rural to urban areas. Unemployment and poverty during the Great Depression exacerbated quality of life issues, increasing rural to urban migration. Price (1971) reinforced Cadwallader’s (1989) assertion that economic factors play a role in migration decisions, but introduced social relationships as another factor. In chain migration, friends and family members maintain close relationships and often move to the same destinations. Price examined rural-to-urban migration from 1870 to 1940 among Mexican-American migrants from South Texas to San Antonio and Chicago, African Americans migrating from Mississippi to Chicago, and Whites migrating from Butler County, Kentucky, to Louisville and Indianapolis. All of these groups experienced chain migration, but Black families experienced it to a greater degree than Mexican American and White families (Price 1971). Price (1971) concluded that Mexican American and
White families generally moved to their new locations as one unit, while Black families mostly engaged in chain migration, with one to two family members moving at a time. Individuals usually moved to a destination because they knew friends or relatives who lived there.

In the South, migrants moved from farms to rural villages and small towns, prompted by environmental degradation, mechanization, and the loss of farm jobs. While the farm population fell 1.2 million during the 1920s, population in rural nonfarm areas, including villages or hamlets with populations of less than 2,500, increased by 18%, with much of this increase occurring outside of incorporated areas (Baker 1933). Counter-urbanization also occurred during the Great Depression as urban dwellers moved to farms. People living in urban areas across the nation had difficulty finding and maintaining jobs, and after a significant period of unemployment, returned to family farms they originally left (Boyd 2002). Many returning migrants were searching for the kind of safety net that family and on-farm food production provided. At least they would not starve.

Race was a significant factor in migration during the 1930s. The diaspora of Black migrants during the Great Migration caused northern cities to become more racially diverse. Blacks were more likely to migrate to cities than Whites during the Great Migration and moved mostly for employment and educational opportunities (Purdy 1954; Trotter, Jr. 2002; Tolnay 2003). Black migrants moved out of the South to escape adverse economic conditions, a push factor exacerbated by the discriminatory culture of Jim Crow. They ultimately faced forms of discrimination and disenfranchise in the North, however. Predominantly Black neighborhoods were common in Northern and
Midwestern cities, and interactions between races were limited. Redlining, which denied bank loans to would-be home purchasers in Black neighborhoods, is an example of an added burdens that Black migrants to cities faced at this time (Hillier 2002). Weaknesses of President Franklin D. Roosevelt’s New Deal policies made it easier for employers to exclude Black workers from promised relief and to discriminate against employees or prospective employees based on race (Braik 2018). The National Industrial Recovery Act of 1933, for example, was passed to regulate industry by instituting fair wages and prices for all workers, and many hoped this legislation would be a catalyst for economic growth. In practice, the Act enhanced the working conditions of White workers only. Black workers were excluded from the wage-specific codes of the National Industrial Recovery Act, employers largely ignored the Act, and the federal government failed to check those exploiting its loopholes (Braik 2018).

Black migrants took many routes out of the South during the Great Migration. Many traveled to Louisville, Kentucky, which served as a transitional setting for some and a permanent destination for others. In-migrants to Louisville saw the potential of owning businesses, gaining an education, and entering the workforce as motivation for making the city their home (Adams 2006). Compared to most southern cities, Louisville was considered progressive for the time. Blacks in Louisville could acquire housing, find jobs, publish newspapers, attend university, and even join the police force. These freedoms and opportunities were a significant pull factor for Black migrants leaving the Deep South and permanently resettling in Louisville (Adams 2001; Adams 2006).

Louisville, however, had negative characteristics that sometimes discouraged permanent resettlement of southern Black out-migrants. Louisville was plagued by a
lackluster and restrictive job market (Adams 2001). The city maintained a system of segregation that was driven by Southern custom rather than laws, undercutting its progressive image. Historian and educator George C. Wright observed in *Life Behind A Veil: Blacks in Louisville, Kentucky*, that Blacks in Louisville were subjected to what he called “racism in polite form” (Adams 2006, 417). In hindsight, Wright and other historians viewed social progress among the Black community in Louisville as a myth because of the economic effects of Jim Crow.

Migration Studies Using Census Data

Census data is a valuable resource for analyzing migration. Most migration studies have used aggregated census data, i.e. counts of individuals within census regions. Chow et al. (2010) used aggregated data from the 2000 census to analyze changes in the Vietnamese-American population in Texas during the prior decade. Vietnamese-Americans migrated from urban to suburban areas, a trend evident at the county and census tract levels. Hugo (1987) used aggregated census data to examine the migration of elderly populations in the United States. Over a span of three decades from 1965 to 1983, the number of elderly people making permanent changes in their places of residence gradually declined. Elderly people became less likely to move, although migration from New England to the Southeast, Texas, and Southern California increased.

Using census data about individuals, on the other hand, is an evolving methodology. Manuscript census data becomes available after 72 years, before which only aggregated data is available. Currently, the 1940 census is the most recent for which manuscript data on individuals is available. Pioneers of using individual census data in
Migration studies were historians James C. Malin in the 1930s and Frank L. Owsley in the 1940s (Inwood and Reid 1995; Swierenga 1990). Malin used federal and state manuscript censuses to track individual farmers and trace the settlement history of Kansas over a 75-year period between 1850 and 1925 (Malin 1935; Swierenga 1990). He found a high rate of turnover among farmers in the rural Kansas frontier, which he attributed to political, social, and economic uncertainty which, in turn, severely handicapped the development of frontier society (Malin 1935). Malin was the first to determine migration rates among multiple-time movers and routes used by large families based on the states of birth of multiple children (Swierenga 1990). Owsley used agricultural censuses from 1850 and 1860 to determine if non-slave owners in the Old South owned farmland, comparing them to the dominant, slave-owning planter class.

Known as “plain folk,” non-slaveholding farmers from the Atlantic states migrated to the South and formed a majority of the South’s population (Owsley 1949; McCall 2013).

Despite the advantages of using manuscript census records, they have drawbacks. Inconsistencies are introduced by changes in census questions and categories, such as terminology for Americans of African descent. Strmic-Pawl et al. (2018) put together a historical timeline of the United States Census’s use of racial and ethnic terminologies. Censuses until the 1930s used the term “mulatto,” whereas censuses from the 1930s onward began using “Negro,” even for people with dual Black and White ancestry. This was known as the “one-drop rule,” which stipulated that any person with even one drop of Negro blood was to be classified as “Negro” in the census. Some censuses used both terms to describe those who were purely Black, and “mulatto” to describe people of mixed race. Respondents of mixed race were identified in accordance with the race of
their father. The term “Negro” was used as an identifier in the “color or race” category, albeit with less emphasis, until 2000, when the term was eliminated permanently and replaced with “Black or African American” (Strmic-Pawl et al. 2018). In addition to changes in racial classifications, the temporal resolution of the census creates holes. The ten-year interval between decennial censuses may cause some moves to be undetected. Possible changes in location within the ten year period were not documented in decennial census manuscripts, which could introduce error to the analysis.

National Park Origins

Public attitudes towards wilderness and nature have changed over time from hostility and fear to respect and reverence, the latter arising from concern over rapid expansion and development. Seventeenth-century colonists in North America initially perceived nature and open expanses of wilderness as resources to be exploited. For example, Puritans in the Massachusetts Bay Colony brought an environmental perspective rooted in a Puritan theology based in European tradition (Stankey 1989). Upon their arrival in the New World, Puritans sought to “carve a garden from the wilds” (Stankey 1989, 17). This task was consistent with their view that wilderness contained anti-Christian forces and must be redeemed from itself. In addition to this spiritual goal, practical and utilitarian matters of settlement entailed using the land and its natural resources for farming and other economic activity.

Early ideas of wilderness, such as those held by the Puritans, had their roots in Judeo-Christian tradition. Wilderness is referenced repeatedly in the Bible. Lands that were described as wilderness, such as those beyond European settlements, were
perceived as vast and desolate. Puritan writings were “permeated with the idea of wild country as the environment of evil,” dangerous because of the absence of European law, religion, and civilization (Nash 2001, 36). Paradoxically, wilderness was also a place of refuge and religious purity, a place for people to retreat and connect with their deity (Stankey 1989; Nash 2001). Many migrants to North America came for reasons of religious freedom. Following independence, wilderness was seen as the nation’s greatest source of wealth because settlers could make use the natural resources such as soils, timber, and minerals (Stankey 1989). The gradual shift towards a positive perception of wilderness had its roots in the eighteenth century. William Byrd II was surveying in Virginia in 1728 when he wrote *History of the Dividing Line*. His description of the area is the one of the first commentaries on wilderness that does not describe it in hostile terms (Nash 2001). While describing his experiences and admiring the landscape, Byrd glorifies wilderness and asserts that it is not something to fear. He did not approach these characterizations from a religious or philosophical standpoint, but from an appreciation of the aesthetic beauty of wilderness.

As the nineteenth century began, a new wave of philosophical thought known as Romanticism took a more intellectual approach to the cultural shift towards reverence for wilderness (Stankey 1989). Romantics championed individual freedom through man’s relationship to nature. They believed that people could forge a spiritual connection with nature which would improve their life. Romantics not only glorified the virtues of nature and the wilderness, but also denounced nature’s destruction in the name of civilization and development. Romantic thought reformulated notions that the wilderness was a product of the Antichrist by associating wilderness with godly creation (Nash 2001).
Positive valuations of wilderness gave rise to a movement in the second half of the nineteenth century to use government policy to preserve it. During this period, nationalists in the United States evoked pride in a cultural identity that emphasized European roots, but asserted American difference. Nationalism blended with Romanticism, as Americans defended the virtues of their new nation from European criticism by proclaiming the superiority of America’s natural features (Nash 2001). American cultural leaders became convinced that, because of the aesthetic qualities of wilderness, America was destined for artistic and literary excellence, attainable only through inspiration from America’s natural features and not through classical European art and literature (Nash 2001).

In the 1850s, the Romantic view of wilderness gave rise to the Transcendentalist movement, spearheaded by philosopher and writer Henry David Thoreau. The Transcendentalist view of wilderness was borne of the fundamental belief that a reality higher than the physical existed (Stankey 1989). This worldview gave expression to older ideas of the presence of divinity in the natural world and nature as the prime inspiration for religion. John Muir, an early advocate for the preservation of American wilderness, reflected the sentiments of Transcendentalists and Romantics, but with greater fervor, putting those philosophical beliefs into action. His life’s work was that of “an explorer and a student of nature” (Van Hise 1917, 105). Muir valued wilderness as an environment in which all creation coexisted in harmony. He also believed that civilization had severed a bond between human beings and other living things. Americans in larger cities were largely unable to experience wilderness. Armed with these ideals, Muir contributed to widespread efforts to ensure that wilderness would be preserved and more accessible to
all, efforts that inspired campaigns to create the national park system. He wrote books, magazines, and poems to convey his belief in the importance of wilderness. Muir also made public speeches on the topic and lobbied clubs and pressure groups to support the cause. His efforts magnified his influence and shaped public and, ultimately, Congressional opinion for the creation of national parks and other protected areas (Holliday 1984).

National Parks and Resident Peoples

The overarching goal of national park creation was to preserve the natural landscape and other historical landmarks and monuments for citizens’ leisure. This mission is stated in the Organic Act (also called the National Park Service Act) of 1916:

“The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” (U.S.C., title 16, sec. 1. cited in National Park Service 1916).

Preserving pristine wilderness, void of human presence, is part of the greater national park idea. While the ideal has changed little, the model by which it is upheld has changed over the last century (West and Brechin 1991). For example, the National Park Service cooperates with the Navajo Tribal Council to manage the historical resources on their
reservations, but the Park Service does not own the land. Another example is that the Park Service allows rural residents of Alaskan national parks to hunt, fish, and trap on those lands (West and Brechin 1991).

Since the inception of the national park system, the Park Service and other federal agencies responsible for the protection of wilderness areas have grappled with the question of how to deal with resident populations. Inhabitants of these lands were diverse. Native Americans, Euro-Americans, and African Americans lived in various proposed park areas. Native Americans experienced wrongful taking of their lands and struggled for recognition of their treaty rights (Kantor 2007). The issue of resident communities surfaced with the first national park, Yellowstone, and has continued to the present.

In some cases, such as at Cades Cove in the Great Smoky Mountains National Park and in the Mammoth Cave area, resentments linger to this day about loss of homes and land and the manner in which displacement was done. In one instance at the proposed Mammoth Cave National Park, while a resident answered a court summons regarding the sale of his property, a demolition crew destroyed the house so that it would not be habitable (Brunt 2009). Mammoth Cave National Park is not an isolated case. It is typical of what has happened throughout the park system’s history. Western parks such as Yellowstone and Glacier National Parks removed Native American tribes such the Blackfoot Nation and the Miwok. Resident communities were displaced for Eastern parks, including the Great Smoky Mountains and Shenandoah National Parks (Brown 2000; Lambert 1989).
Years before the creation of the national park system, government actions towards resident peoples set precedents that shaped future policies. These actions included displacement of any human inhabitants. Among other issues, their displacement raises the issue of racial justice. Policies such as the Indian Removal Act, enacted by President Andrew Jackson on May 28, 1830, resulted in the forced migration of several eastern tribes to federal lands set aside for them in what is today Oklahoma. President Jackson’s intentions have been widely debated, given that the Act was not designed to revoke Native American treaty rights or remove tribes. The Act “neither authorized the unilateral abrogation of treaties guaranteeing Native American land rights within the states, nor the forced relocation of the eastern Indians. Yet both occurred, on a massive scale, during Andrew Jackson’s administration and were the result, not of an explicit congressional mandate, but of an abuse of presidential power” (Cave 2003, 1331-1332). The resulting forced migration caused thousands to die of hunger, disease, and exposure in what became known as the Trail of Tears (Spence 1999). Tribes forced to migrate included the Cherokee, the Chickasaw, Choctaw, Creek, and Seminole (Kilpinen 2004). This removal was part of a long history of forced movements that excluded Native Americans from their traditional homelands, a precedent that continued as national parks were established in the West.

Government and park officials in Yellowstone and Glacier National Parks removed and excluded Native American groups from their traditional lands and sacred dwelling sites (Nash 2001; Spence 1999). For example, in the eighteenth and nineteenth centuries the Blackfeet lived in the area that would become Glacier National Park, but park officials instituted and enforced policies that abrogated treaty rights and excluded
them (Spence 1996; Spence 1999). Native American tribes possessed a spiritual connection to sacred landscapes. For example, tribes believed that spirits such as the Wind Maker, Cold Maker, Snow Shrinker, and Thunder lived in the mountains. They also believed in stories about mythological characters connected to landscape, such as Napi (Old Man), a demigod portrayed as a trickster who created the landscape and animals (Spence 1999). Tribes also referred to peaks that soared over ten thousand feet in elevation as the "backbone of the world" (Harper 2010, 3). According to archaeologists, the Blackfeet used the Glacier area for over a thousand years and lived off the resources of the area now within the national park. They cultivated a culture and an economy based on trade and sustenance through hunting and farming. These spiritual and historical connections led tribes to resist removal through legal action and armed conflict, an ultimately unsuccessful effort (Sholar 2004; Spence 1999).

The history of Glacier National Park provides an example of resistance to removal through legal action (Sholar 2004). In 1895, the tribes of the Blackfoot Nation sold the western part of their land to the United States government for $1.5 million. Under a treaty, the Nation retained certain rights on the land, including the right to co-manage natural resources and to continue to hunt and fish. This agreement was reached on condition that the land remained public. The federal government, however, gradually decreased Blackfeet access to the territory. The 1910 creation of Glacier National Park, which outlawed hunting and fishing, as all national parks do, abrogated their 1895 treaty rights. This amounted to a governmental taking and, in response, the Blackfoot Nation sued the U.S. government. In 1925, the Piegan Blackfeet took the federal government to court over the ceded area. A decade later, the U.S. Court of Claims ruled that by failing to
exercise their rights before the creation of Glacier National Park, the Blackfeet relinquished them and were therefore not entitled to compensation. The Court stated this as their rationale for the ruling in spite of testimony that as many as two hundred Blackfeet had exercised their treaty rights (Burnham 2000).

The Blackfeet filed several more lawsuits against the federal government and the National Park Service over the loss of the tribes’ treaty rights from the 1895 agreement (Ashby 1985). In 1957, the tribe filed a petition with the Court of Claims and the Indian Claims Commission, claiming that “the original survey of the ceded strip of land had cheated them out of 45,000 acres” (Burnham 2000, 155). In 1975, with the help of the Native American Rights Fund, the tribe petitioned the Secretary of the Interior to restore their rights to hunt, fish without a license, and cut timber for personal use in the ceded section. One added stipulation to this petition was that these rights would be utilized “in a conservationally correct manner with park oversight” (Burnham 2000, 155). These actions were largely unsuccessful, as the courts, the Secretary of the Interior, the Indian Claims Commission, and the Solicitor General of the United States rebuffed the tribes each time. The National Park Service and Glacier National Park have consequentially neglected to recognize the Blackfeet as having any role in the eastern portion of the park (Sholar 2004).

In contrast, tribes in Yosemite National Park were able to maintain their villages and make themselves a part of the park’s social and cultural landscape. This was an exception to the general policy of immediate removal of resident peoples in parks (Spence 1999). Yosemite natives integrated into the tourism business as hotel workers, tour guides, and wagon drivers, miners, and woodcutters. Park policy, however, began to
shift in the 1950s in regard to Native American tribes in Yosemite, as park officials limited their employment opportunities. The action caused individuals and families to relocate outside the park. As the indigenous population grew, officials enacted more stringent policies that attempted to inhibit their continued residence in the park (Spence 1999). In the 1950s and 1960s, the Park Service burned dwellings to prevent rehabilitation after families moved out. A few families remained in the park into the 1990s. Over a century of residence by the Yosemite Indians and their integration into the park’s labor force and cultural attractions provide an alternate model of the relationship between parks and resident peoples, albeit one that was not widely accepted by the National Park Service.

The establishment of national parks in the United States initially assumed the absence of human residents, so policies based on the American national park ideal were designed to protect intrinsic values instead of valuing the consumptive use of protected areas by local people. The social impact of the displacement and relocation of resident people is often misunderstood and underestimated. However, it is difficult to predict the cumulative social impact of forced out-migration because effects differ from one scenario to another (West and Brechin 1991). One specific impact of human displacement involves the effect on the rural poor. In a perfect world, various forms of compensation can be used to assuage the impact, but the danger of damaging the cultural integrity of a place or a certain group of people remains (West and Brechin 1991). The Mammoth Cave park area is a classic example of this unfortunate occurrence. Tenants and renters did not own property, so did not receive compensation for relinquishing their homes. While they
were less likely than homeowners to command financial resources to facilitate a move, they were still required to leave (Algeo and Eke 2018).

Eminent Domain

During the creation of the national park system, local, state, and federal governments used eminent domain to acquire privately held lands when owners were unwilling to sell. Eminent domain is a state or national government’s power to usurp and regulate property when its proposed use is necessary for the good of the public. Several U.S. Supreme Court cases, such as Berman v. Parker (1954) and Kelo v. City of New London (2005), have called into question the definition of eminent domain and the validity of this governmental power (cited in Hudson 2010). Berman v. Parker is based on the takings clause of the Fifth Amendment of the United States Constitution, which places limitations on eminent domain by stating that governments cannot seize private land for public use without proper payment. This case involved property taken in a blighted area of Washington, D.C., for the purpose of redevelopment. The plaintiffs brought suit against the District of Columbia’s Redevelopment Land Agency, but the Supreme Court ruled that the agency was within their power under the Fifth Amendment to do so. Kelo v. City of New London involved the use of eminent domain to allow land transfers between owners for economic development. The Court extended the Berman decision to include property in non-blighted areas. The decision also considered benefits enjoyed by a community because of economic growth, an endorsed usage under the takings clause.
Even though eminent domain had a larger social purpose, its use often caused resentment or resistance among displaced residents. For example, in the 1930s, the Tennessee Valley Authority (TVA) was established as a part of President Roosevelt’s New Deal policies. The TVA immediately began to build a series of dams and reservoirs to provide power to customers, many of whom lived in poor and remote mountain communities in Tennessee and surrounding states (Owen 2014). The TVA was authorized to conduct land condemnation according to Section 25 of the TVA Act. Construction of the Fontana Reservoir in Bryson City, North Carolina, for example, required the TVA to purchase 55,000 acres of land, a process that resulted in the displacement of 1,311 families from their homes (Brown 2000). In 1946, after initial resistance from landowners of these tracts of land, in which they contested the right of the U.S. government to acquire the land, the United States Supreme Court upheld the TVA’s right to condemn in the case Tennessee Valley Authority v. Welch (McCarthy 1949).

A similar situation occurred in the early 1960s at the Land Between the Lakes on the Tennessee-Kentucky border. The TVA planned to dam the Cumberland River and create a national recreation area between Lake Barkley and Kentucky Lake. This area would be created out of private lands that were to be condemned through eminent domain. Residents of the area voiced their displeasure by attending TVA meetings and aggressively challenging officials on every talking point. Others picketed the meetings with signs and anti-TVA epithets (Foresta 2013). Although Land Between the Lakes was ultimately designated a National Recreational Area in 1963 and is popular among Kentuckians today, displaced locals criticized the TVA for ignoring the concerns of the residents who were affected by this project.
Created at the same time as Mammoth Cave National Park, Shenandoah National Park in Virginia presents another example of the use of eminent domain. Backed by a ruling of the State of Virginia’s highest court, the Virginia state government was authorized to acquire private lands in the park area and force residents from their homes (Lambert 1989). The state governments of Tennessee and North Carolina also used eminent domain during the establishment of Great Smoky Mountains National Park to force owners to sell privately held land. Cades Cove, a region on the western border of the area that would become Great Smoky Mountains National Park, became the epicenter of resistance (Dunn 1988). Most residents of Cades Cove were descended from initial settlers of this valley in the Tennessee portion of the Smoky Mountains. Inhabitants lived in a close-knit community with cooperative economic activities, shared goals and common moral attitudes. As a result, they developed and maintained a connection to their homes and community and resisted the government’s actions. The majority of Cades Cove residents viewed relocation with “dread and apprehension” (Young 2006, 174). The battle for the Cove went to court, but in spite of their efforts, residents were unsuccessful in saving their community. The court ruled that the state was legally within its power to exercise eminent domain (Dunn 1988).

Eminent domain was also used in the proposed Mammoth Cave park area. In 1928, the Kentucky state legislature, acquiescing to the desire of leaders of the park movement to use eminent domain, created the Kentucky National Park Commission. The Commission was given the power to use eminent domain and take over land acquisition from the Mammoth Cave National Park Association. This action exemplified state leaders’ viewpoint that the benefits of a national park in Kentucky justified the
displacement of the Mammoth Cave area’s pre-park residents (Algeo and Eke 2018). Like residents at Cades Cove, people in this area had a long settlement history, in this case dating to European settlers who arrived during the French and Indian War (Noble 1991). The long history contributed to a firm attachment to place because their ancestors dwelled there for generations and many were buried there. Although court records exist in the National Archives, the extent to which eminent domain was used in the Mammoth Cave area is still poorly understood.
CHAPTER THREE: STUDY AREA

The study area of this thesis is Mammoth Cave National Park, which lies in portions of Edmonson, Hart, and Barren Counties in the karst region of south-central Kentucky (Figure 3.1). Today, the park contain 52,830 acres, most of which is in Edmonson County (Ward 2001). The landscape consists of forested hills, rocky bluffs, river bottoms, and karst features. The Green River and its tributary, the Nolin, flow through the park.

A popular tourist attraction since the early nineteenth century, Mammoth Cave is regarded as an important part of the American natural landscape (Algeo 2004; Schmitzer 1995). At approximately 405 miles, Mammoth Cave is the longest known cave (Palmer 2016). The land above it has had a series of owners, starting with Pheltius Valentine Simons in the late eighteenth and early nineteenth centuries and followed by John Flatt during the War of 1812 (Sides 1997). Under Flatt’s ownership, the cave was the site of one of the largest saltpeter mining operations in Kentucky. Demand for saltpeter, used in gunpowder, was high during the war. The manager of the operation, Archibald Miller, lived in a log cabin that grew into the first Mammoth Cave Hotel (Olson 2010). The cave’s owners employed approximately seventy Black slaves to mine saltpeter (Ward 2001). The cave was sold in 1812 to Charles Wilkins, who was later joined in ownership by Hyman Gratz. Once the war ended in 1815, saltpeter mining halted due to declining demand (Ward 2001). Following Wilkins’ death, Gratz sold Mammoth Cave, Dixon Cave, and 1,300 surface acres to Franklin Gorin in 1838. Gorin was an attorney whose family had helped settle Glasgow, in Barren County, years before. The hotel became an important part of Mammoth Cave’s growing tourism business during the nineteenth
century. In addition to tourism, the region around Mammoth Cave was home to a variety of economic activities, including farming and small businesses.

Figure 3.1: Proposed Mammoth Cave National Park and surrounding region. (Source: Created by author)
On October 8, 1839, physician John Croghan acquired Mammoth Cave and surrounding properties (Thomas et al. 1970). Under Croghan’s ownership, a two-story resort hotel was constructed (Lera 2009). Starting in 1842, Croghan used the cave as an infirmary for people stricken with pulmonary tuberculosis (Sides and Meloy 1971). Croghan himself died of tuberculosis at Locust Grove in the winter of 1849, leaving Mammoth Cave to his nieces and nephews in the form of a trust charged with operating the cave and hotel as tourist enterprises (Algeo 2004). This trust owned the cave and most of the surface land above it until the national park was created (Algeo 2004).

The Mammoth Cave area saw racial dynamics that were somewhat atypical for the South. The region’s residents were predominantly White, but a number of Blacks worked at the cave, some making unique contributions to its exploration and development (Schmitzer 1996; Algeo 2012). Although Whites controlled day-to-day operations at the cave and hotel, most of the Antebellum guides, such as Stephen Bishop, Jonathan Doyle, and Nicholas and Materson Bransford, were enslaved African Americans (Olson 2010). Tourists considered Bishop and the Bransfords the most trusted guides at the cave (Lyons 2006). Nick and Mat both married and remained in the area after emancipation. Their children and many later descendants worked at the cave or hotel. Blacks and Whites worked together in some jobs, such as building and grounds maintenance, and trail and bridge maintenance in the cave. In the hotel, where workers were more visible to tourists, racialized roles prevailed. Blacks worked as porters and waiters, while Whites worked primarily as clerks and managers (Lyons 2006).

Descendants of enslaved guides include Ed Bishop, Will Bransford, who served as lead guide for 31 years, and Matt Bransford who, with his wife Zemmie, converted their two-
story house into a hotel for Black tourists (Algeo 2012). Matt and Zemmie not only lodged and prepared meals for Black cave visitors at the Bransford Hotel, but also gave them access to the Mammoth Cave in spite of Jim Crow-era restrictions on housing and travel (Lyons 2006; Algeo 2012).

Race relations in the tourism sector make this area an example of a “racialized landscape” (Alderman and Modlin, Jr. 2014). Algeo (2012) explored African American tourism in the Mammoth Cave area and noted that social institutions of the time severely limited African American tourist experiences. The Mammoth Cave Hotel, for example, remained Whites-only into the 1940s. Cave guide and hotel owner Matt Bransford, however, with the cooperation of Mammoth Cave Estate trustee Albert Janin, created opportunities for African Americans to see the cave, keeping these tourists apart from their White counterparts (Algeo 2008).

Life in the Mammoth Cave area was generally difficult, economically. Most residents were farmers who struggled to make an adequate living because of hilly land and poor soil. Some also worked at the Mammoth Cave Hotel as cave tour guides. Their economic struggles were compounded by forced migration as the park was created. Earlier histories of the Mammoth Cave areas touching on the outmigration have talked about landowners, but tenants have been virtually overlooked (Algeo and Eke 2018). This research strives to understand what became of all types of residents, whether they were property owners or not.

The 1930s brought significant changes for residents in the vicinity of Mammoth Cave as a movement to create a national park was started. The last heir to the Mammoth Cave estate died in 1929, after which the Mammoth Cave National Park Association
purchased the property. In keeping with efforts to achieve and uphold the national park ideal of uninhabited wilderness, hundreds of farms and homes, as well as thousands of acres of hillsides, wooded areas, and valleys, were purchased, piece by piece, over a period of nearly fifteen years (Lyons 2006). This study documents where the inhabitants went.
Data Collection

Demographic information on residents of the Mammoth Cave region was compiled from manuscript censuses for 1920, 1930, and 1940. The 1920 census served as a starting point for the analysis because it is the most complete record of who lived in the area prior to the 1926 authorization of Mammoth Cave National Park. Land purchases set mass displacement in motion. By the time of the 1930 census, migration from the Mammoth Cave region had begun, but most residents remained. Out-migration was largely completed by 1940, and the park was officially established the next year. The National Archives and Records Administration made the 1940 manuscript census data available in 2012 after the federally mandated 72-year delay intended to ensure privacy of individuals’ information (U.S. Census Bureau 2008). For this reason, this analysis would not have been possible prior to 2012. At the time of this research, census manuscripts after 1940 had not yet been released to the public, making 1940 the last possible census to use.

Within Edmonson County, the proposed park area encompassed parts of four 1920 magisterial census districts: Parker, Brownsville, Sulphur Springs, and Fork (Figure 4.1). Parker (Magisterial Census District 4), located in the southeast portion of Edmonson County and south of the Green River, included the Flint Ridge community, a racially mixed community where many of the cave guides and hotel workers lived. Approximately three-quarters of the district was included in the proposed park boundary. The 1930 census called this district “Parker and Rocky Hill,” but the district’s boundaries
remained the same. Rocky Hill was a small community in the southeast corner of Edmonson County, just outside of the proposed park boundary. By 1940, the name of the district had reverted to Parker.

Sulphur Springs (Magisterial Census District 3), was located in the southwestern part of Edmonson County, adjacent to Warren County. Only the northeastern portion of Sulphur Springs, approximately 5% of the district, became part the park. Approximately half of the Fork district (Magisterial Census District 5), which was located north of the Green River, was situated in the park. All three of these census districts contributed to the park, but none of them was completely contained within it.
Data collection was complicated by the difficulty of determining which census entries represented households inside the proposed park boundary and which entries fell outside that boundary. In rural areas where street addresses were not in use, the most precise geographical location available for a census entry is the magisterial district. Since the proposed park cut across these districts, some households in a district were within the proposed park, but others were not. As part of his thesis, Western Kentucky University Geoscience graduate student Matthew Brunt (2009) worked to match 1920 census entries with known house locations within the park area and matched approximately 30% of known house locations with census entries for a head-of-household. The out-migration project described in this thesis started at census entries matched with houses well inside the park area and worked linearly through the census. It relied on the fact that census workers followed the road system from house to house as they collected data for the manuscript census. By tracking Brunt’s matches as they appeared on manuscript census pages, it was possible to have a high degree of certainty that all entries selected were within the park. When data collection reached census entries matched with houses near the park border, a new matched entry well within the park was selected, and data collection continued.

All individuals in census entries thus selected became part of the sample. The final sample consisted of 855 individual census entries representing people whose out-migration destinations were sought. The sample focuses on the three magisterial districts that made up the bulk of the proposed park -- Parker, Sulphur Springs, and Fork. Sampling from these districts captures the diversity of people living within different pre-park communities. For example, the concentration of Black residents was greater on Flint

This methodology results in a sample of convenience and entails some error. It favors households who lived in the interior of the proposed park area and omits most households living near the edge of that area. However, in the face of data sources with less than optimal geographic resolution, it provides a high degree of confidence that all sampled census entries were part of the forced out-migration stream.

Information about individuals in the sample, including name, date of birth, race, home ownership status, and place of residence, was recorded in an Excel spreadsheet. As a marker of economic status, all members of a household were given the same homeownership value (owner or renter) as the head-of-household. The 1930 and 1940 manuscript censuses were searched to determine where sample members were living in those years. Household groupings were most helpful in locating family members. While individual names may recur many times in a census, assemblages of the same group of names representing a family almost never occur. Other census information useful in identifying individuals included birth dates, place of birth, and residential location five years earlier. An additional 175 individuals who were not part of the sample were included in the Excel spreadsheet and tracked through the 1930 and 1940 censuses because of their utility in locating members of the sample. Most of these individuals were family members born after the 1920 census was recorded, and their names appeared in households in later censuses. Tracking adults with children, a distinctive grouping of names, was much easier than tracking lone individuals. Children who appeared first in the 1930 census were added to the database to assist with locating parents and older
siblings in the 1940 census. Other data sources, including city directories and death certificates, were useful for locating individuals and verifying identity. The residential locations of individuals in 1930 and 1940 were recorded by the name of the census designated place for clustered settlements (i.e. villages, towns, and cities), and by county name for rural, unincorporated locations.

Classification of Destinations and Cartographic Analysis

A list of unique destinations for Mammoth Cave out-migrants was compiled. Each destination was classified as urban or rural based on population in 1920. The United States Census Bureau defines urban areas as incorporated places that have 2,500 people or more. For this study, places with populations less than 2,500 were considered “rural,” and all others were considered “urban.” The number of individuals who migrated to each destination were tallied. Tallies were also made, by destination, for the key variables of race and homeownership. These tallies were then aggregated to the state level.

Out-migrant destination tallies, by state, were mapped in 1930 and 1940. To show greater detail, a series of maps showing census designated places and counties were mapped. Chloropleth maps used graduated colors to represent the number of individuals living in rural areas within a county. These were overlaid with graduated circles representing the number of migrants to specific urban areas. Maps were made for all migrants that it was possible to track and for specific subgroups (Black, White, homeowner, and renters).
Statistical Analysis

Difference of proportions tests were used to test for significant differences between the destinations of various subgroups. A two-sample difference of proportions test was conducted to investigate whether Blacks and Whites migrated to the same type of area, e.g. urban or rural, in equal proportions. A similar test was conducted comparing owners and tenants.

Two more difference of proportions tests were done, one for frequency of migration (one move versus two, as recorded in the 1930 and 1940 censuses), and the other for migrants who were untraceable. The latter test determined which subgroups were most likely to have residents who could not be found. It was designed to shed light on one of the limitations of the research, the difficulty of finding certain residents. There are a variety of reasons why a living individual might be difficult to locate in the 1930 and 1940 censuses, most of which speak to enhanced socioeconomic stress, such as homelessness or household dispersal. For example, since it was easier to track family members who remained together in a household, households that broke up as a result of out-migration are underrepresented in the sample of tracked migrants. This test addresses the question of whether any of the subgroups investigated (Black, White, homeowner, renter) was disproportionately affected by such stressors.

Limitations to Research

Although the manuscript census is an official government document, it contains a variety of errors. Census records frequently had multiple spellings of residents’ names, and were not always legible. In addition, the census process sometimes misses
individuals, particularly the homeless or people in temporary shelter or in transit between locations. For these reasons, it was not possible to locate all members of the 1920 population sample in both 1930 and 1940. Some could not be found in either census year.

Another research limitation was specific to tracking young women in the 1920 population sample, as many married and changed their surnames. Marriage certificates and family tree information on ancestry.com (the latter compiled by local genealogists) provided a starting point for identifying their married names. Given the variable reliability of publicly-sourced family trees, any information gleaned from them was verified through other sources, such as death certificates or the presence of known siblings or parents in later census households. Despite these additional data sources, it is suspected that young women in the 1920 sample are underrepresented the set of tracked out-migrants.
CHAPTER FIVE: RESULTS AND DISCUSSION

The sample from the 1920 census contained 855 residents of the soon-to-be park area. These individuals’ out-migration destinations were sought in the 1930 and 1940 censuses. Of the 855 sample members, 537 (64%) were successfully tracked, meaning that migration outcomes were confirmed in 1930, 1940, or both (Table 5.1). Among this group were 12 people in households where the housing status was listed as “Unknown.” The twelve individuals of unknown housing status were included in the race analysis but not in the home ownership analysis. The remaining 318 individuals in the sample were present in the Mammoth Cave area in 1920, but could not be located in later censuses. A few of them died before relocating. The rest simply could not be found in the 1930 or 1940 censuses. The 537 successfully tracked out-migrants represent a mass movement and give a clearer picture of unintended consequences stemming from park creation.

In some cases a member of the sample was found in the 1930 or 1940 censuses (or both), but it was not possible to determine whether they had moved to a different residence. These individuals are tallied in the last line of Table 5.1. In this scenario, a

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>NUMBER OF RESIDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successfully Tracked Residents (Confirmed Destinations in 1930, 1940, or both)</td>
<td>537</td>
</tr>
<tr>
<td>Unsuccessfully Tracked Residents (deceased by 1930)</td>
<td>62</td>
</tr>
<tr>
<td>Unsuccessfully Tracked Residents (Not found in 1930 and deceased by 1940)</td>
<td>12</td>
</tr>
<tr>
<td>Unsuccessfully Tracked Residents (No destinations confirmed in 1930 and 1940)</td>
<td>144</td>
</tr>
<tr>
<td>Unsuccessfully Tracked Residents (Found in 1930 and/or 1940 census, but no definitive evidence of relocation)</td>
<td>100</td>
</tr>
<tr>
<td>TOTAL</td>
<td>855</td>
</tr>
</tbody>
</table>
resident remained in the same census enumeration district, one of the districts that contained a portion of the proposed park. The spatial resolution of the census in rural areas allows people to be pinpointed only to a magisterial census district, not to a street address. This often makes it impossible to know with certainty whether they moved to a new residence, e.g. one just outside the park boundary, or remained in their old residence. Because of this uncertainty, these individuals were not included in the statistical analysis.

Table 5.2 shows successfully tracked residents broken down by race and homeownership status. This information cross references the key variables of race and homeownership for greater understanding of population demographics.

<table>
<thead>
<tr>
<th></th>
<th>Housing Status in 1920</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Homeowner</td>
</tr>
<tr>
<td>Black</td>
<td>28 (56.0%)</td>
</tr>
<tr>
<td>White</td>
<td>272 (55.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>300 (55.9%)</td>
</tr>
</tbody>
</table>

Whites in the sample were decidedly in the majority, as the population of the Mammoth Cave area was predominantly White. Slightly less than 91% of successfully tracked migrants were White. Kentucky’s Black population steadily declined over the course of a century before the creation of Mammoth Cave National Park. In 1830, 25% of the population of Kentucky was Black, dropping to 13% in 1900 and 9.5% by 1920 as an increasing number of Black families moved north for jobs (Lyons 2006). These numbers reflect the effects of slavery and a post-Civil War culture in the South that caused Blacks and their families to leave in large numbers over the next 60 years. Only 50, or slightly more than 9%, of the 537 successfully tracked residents were Black, with 56% of this
number residing in their own homes and 44% renting. Whites made up a majority of the overall population of the Mammoth Cave National Park area. Therefore, they made up a large majority of the successfully tracked residents. Of the 487 successfully tracked White residents, slightly less than 56% of them lived in owner-occupied housing and about 42% were in rental or tenant housing. Nearly equal percentages of Blacks and Whites lived in owner-occupied housing. Homeowners, regardless of race, were compensated for the loss of their homes and property, while renters and tenants were not entitled to compensation. Non-home owners, as a result, did not have as many financial resources at their disposal when they had to relocate. The remaining 2.4% of the sample had ownership statuses that were indeterminate. In all, slightly less than 56% of successfully tracked residents in the sample lived in owner-occupied housing, 42% lived in rented or tenant housing, and about 2% had unknown housing statuses.

Map Analysis: State-Level Migration

Migrants traveled to locations that were mostly north, west, and east of the park (Figures 5.1 and 5.2). Most remained in Kentucky after leaving the park area, many moving to rural Barren County and the state’s largest city, Louisville. Of those who moved out-of-state by 1930, more went to Illinois, Indiana, and Ohio than other states (Table 5.3). These were important agricultural states, and some out-migrants settled in farming communities, but others found industrial employment in cities. Deaths of some
individuals in the original sample and greater difficulty locating the remainder account for fewer sample members being found in 1940.

Figure 5.1. Destinations of Mammoth Cave out-migrants by state, 1930. (Source: Created by author)

Figure 5.2. Destinations of Mammoth Cave out-migrants by state, 1940. (Source: Created by author)
Illinois was the leading out-of-state destination with 36 Mammoth Cave out-migrants by the time of the 1930 census. Most of these out-migrants settled in western Illinois, with others settling in eastern and northern Illinois. Surprisingly, very few moved to Chicago and its surrounding suburbs. The tally for Illinois declined to 20 by the 1940 census because several individuals moved to other states and others had died or could not be located in this census.

Indiana was the second-most popular destination among Mammoth Cave out-migrants. The 1930 census showed that 28 sample members moved to Indiana, primarily to the capital, Indianapolis. This number declined slightly to 22 before the 1940 census. By then, Indiana had become a destination for several twice-migrants. Two members of the sample who originally moved to Jessamine County, Kentucky, relocated to Hammond, Indiana. One moved from Glasgow, Kentucky, to Indianapolis, and one from

<table>
<thead>
<tr>
<th>State or Territory</th>
<th>1930 Census</th>
<th>1940 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii Territory</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Illinois</td>
<td>36</td>
<td>20</td>
</tr>
<tr>
<td>Indiana</td>
<td>28</td>
<td>22</td>
</tr>
<tr>
<td>Iowa</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Kentucky</td>
<td>385</td>
<td>357</td>
</tr>
<tr>
<td>Michigan</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Missouri</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Nebraska</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>New York</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Ohio</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>West Virginia</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Undetermined*</td>
<td>69</td>
<td>96</td>
</tr>
<tr>
<td>Deceased</td>
<td>N/A</td>
<td>19</td>
</tr>
</tbody>
</table>

* Not located in this census decade but found in the other one
Bristow, Kentucky, to Hamilton County, Indiana. Indiana also became a source region for return migrants, with one relocating to Louisville and one to Barren County.

Mammoth Cave area migrants also moved to Ohio, although not in as great a number as to Illinois or Indiana. Eight migrants moved to Ohio by the 1930 census, but two returned to rural Edmonson County, Kentucky, by 1940, three moved to Ohio, and one died. Two migrants could not be found in 1940. Overall, Ohio had no net change in in-migrants between 1930 and 1940. The data regarding out-migration to these three states suggests that for some out-migrants, proximity was a factor in their decisions.

Migrant destinations also included Missouri, Michigan, West Virginia, Iowa, Wisconsin, New York, Oklahoma, Nebraska, and what was at the time known as the Hawai‘i Territory. By the 1930 census, seven migrants moved to Missouri, one to West Virginia, one to Oklahoma, and one to a military base in Hawai‘i. This last individual had the longest out-migration found in the sample. Smaller numbers of Mammoth Cave area migrants moved to these states, which are generally farther from Kentucky. This pattern suggests the influence of distance decay, as longer distances generally decrease the potential for spatial interactions between places. This friction of distance reflects the increased effort, time, energy, and financial resources that a long-distance move typically requires. States that share a border with Kentucky saw the largest number of Mammoth Cave out-migrants. Migration declined to states that are two or more states away from Kentucky.

By the 1940 census, one of the seven migrants who moved to Missouri had died. Four moved to Iowa, and two could not be found. One additional out-migrant moved to Missouri from the Mammoth Cave area. Thus, Missouri retained a single known out-
migrant by the time of the 1940 census. Wisconsin, New York, and Nebraska appeared as destinations for the first time in 1940. One migrant moved from Chicago to Wisconsin, and two migrants moved to New York, one to Rochester, and one to the U.S. Navy Yard in Brooklyn, where he entered service. One additional person moved to Nebraska from Kentucky in 1940. Iowa had the largest net gain in Mammoth Cave area out-migrants from 1930 to 1940. None of the sample had moved there by 1930, but by 1940, nine migrants were found there, all relocating from earlier migration destinations. Five moved to Iowa from Illinois and four from Missouri.

The results show that out-migrants who moved to states neighboring Kentucky were willing to move further if they desired or it was necessary to do so. The sample also showed no migration to the Deep South, likely because of the social and economic turmoil that plagued the region during the Great Depression. Factors contributing to the unattractiveness of the South included lack of jobs caused, in part, by farm mechanization, and rampant racism and discrimination that was a by-product of Jim Crow laws.

Rural and Urban Migration Trends

A central research question for this study was: Did Mammoth Cave out-migrants favor urban or rural destinations? Figures 5.3 and 5.4 show the distributions of Mammoth Cave out-migrants in 1930 and 1940 by urban place and rural parts of counties. Migrants to urban destinations (those with a population of 2,500 or greater) were shown with graduated circles. Migrants to rural places (population less than 2,500) were aggregated at the county level and depicted with a choropleth map.
Figure 5.3. Destinations of sampled Mammoth Cave out-migrants, 1930.
(Source: Katie Algeo and Collins Eke)

Figure 5.4. Destinations of sampled Mammoth Cave out-migrants, 1940.
(Source: Katie Algeo and Collins Eke)
In the 1930 census, a total of 151 Mammoth Cave sample members resided in urban areas and 426 in rural areas. By the 1940 census, 90 sample members were found in urban areas and 330 in rural areas. Where an urban destination appears within a county that also has rural destinations, the migrant totals for each are exclusive. For example, several migrants moved to Bowling Green in Warren County, while others settled in rural areas outside of the city. Members of the Hunt, Cowles, and Page families settled in Bristow, just northeast of Bowling Green in rural Warren County. In Figure 5.3, both Bowling Green and rural Warren County are depicted on the map. As of the 1930 census, relatively few people had left the park area, which accounts for the large portion of the sample found in rural Edmonson County. This data is significant because it helps observers understand migration trends involving urban and rural areas for all Mammoth Cave out-migrants.

Among urban destinations, Louisville became home to more Mammoth Cave area out-migrants than any other urban area. In 1930, 51 migrants were found in Louisville, a number that dropped to 38 by 1940. Louisville was one of the most industrialized cities in the state and region, and it presented job opportunities in a growing manufacturing sector.

During the 1920s, more than 150 new factories opened their doors and others, such as the Ford Motor Company, expanded (Bennett and Gatz 2008). The Brown and Williamson Tobacco Corporation relocated from North Carolina to Louisville in 1929. During the Great Depression, Louisville “neither suffered significantly less nor more than the rest of America” (Bennett and Gatz 2008, 7). Although several banks in the city failed, including BancoKentucky and the National Bank of Kentucky, manufacturing plants continued to operate and provide jobs at a time when the unemployment was
widespread elsewhere. Distilleries also returned to Louisville when Prohibition ended in 1933. Although the city was devastated when the Ohio River flooded in 1937, killing ninety and causing $54 million in losses and the temporary evacuation of 230,000 residents, it soon rebounded thanks to a strong industrial sector (Bennett and Gatz 2008).

In the 1930 census, urban and rural destinations were concentrated in Kentucky, Illinois, Indiana, and Ohio. In addition to Louisville, Indianapolis, and Chicago, other notable urban destinations included Monmouth and Kewanee in Illinois and Logan in West Virginia. Other rural destinations included small areas in central Missouri. Outlier destinations included Flint, Michigan, and Honolulu in the Hawai‘i Territory. By the 1940 census, this distribution had dispersed further as the number of destinations grew. In addition to the large numbers of Mammoth Cave area out-migrants in these four states, others went to places such as St. Louis, Missouri, Detroit, Michigan, Rochester, New York, and Lincoln, Nebraska, with outliers in Hunter Township, Oklahoma, and the United States Navy Yard in Brooklyn, New York. The vast array of destinations also included rural areas in southwestern Iowa and Vilas County in northern Wisconsin.

Table 5.4 shows the percentages of migrants moving to urban and rural destinations as of the 1940 census by race and homeownership. Of the four race and home ownership categories, Blacks were the only group who were more likely to move to urban than rural areas. More Whites, owners, and renters from the proposed Mammoth Cave National Park moved to rural areas than urban areas. All of the migrants with an unknown housing status moved to rural areas.
Table 5.4. 1940 migration destination type by race and home ownership.

<table>
<thead>
<tr>
<th>Types of destinations</th>
<th>Percentage of Blacks</th>
<th>Percentage of Whites</th>
<th>Percentage of Homeowners</th>
<th>Percentage of Renters</th>
<th>Percentage of Indeterminate Housing Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>55.3</td>
<td>17.4</td>
<td>17.8</td>
<td>26.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Rural</td>
<td>44.7</td>
<td>82.6</td>
<td>82.2</td>
<td>73.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Destination Type (Urban vs. Rural) by Race

Figures 5.5, 5.6, 5.7, and 5.8 illustrate the movement of Mammoth Cave out-migrants by race in 1930 and 1940. The number of Black migrants overall was small. Of the fifty Black migrants who were successfully tracked, about 55% moved to urban areas.

Figure 5.5. Destinations of Black Mammoth Cave out-migrants, 1930. (Source: Katie Algeo and Collins Eke)
Figure 5.6. Destinations of Black Mammoth Cave out-migrants, 1940. (Source: Katie Algeo and Collins Eke)

Figure 5.7. Destinations of White Mammoth Cave out-migrants, 1930 (Source: Katie Algeo and Collins Eke)
Six, or approximately 12%, moved to Louisville in 1930, and nine (18%) lived there in 1940. This data about Black migration provides insight into the little-studied lull in the Great Migration during the 1930s. The forced migration from the proposed Mammoth Cave National Park provides evidence that migration did occur during that period, and these results suggest that rural-urban migration was an important pattern at the time. The distribution of White migrants in 1930 and 1940 was more widespread, with only 17% moving to urban areas. White out-migrants moved to rural and urban areas in six different states and the Hawaii Territory in 1930. The distribution spread to eleven states by 1940. Most White out-migrants remained in close proximity to Mammoth Cave in Edmonson, Barren, Hart, Grayson, and Warren Counties.

Figure 5.8. Destinations of White Mammoth Cave out-migrants, 1940. (Source: Katie Algeo and Collins Eke)
In all, more than half of Black migrants from the Mammoth Cave National Park area moved to urban areas (Figures 5.5 and 5.6). One urban area in particular, Louisville, was at the center of the Great Migration; during the lull in the migration, Louisville attracted Black migrants from places further south, including six Black out-migrants from the Mammoth Cave region. Blacks came in search of job opportunities and sanctuary from more discriminatory regimes elsewhere.

As a result, a prominent African American community in Louisville grew during this time. While Louisville was more progressive than other southern cities in terms of race relations, Blacks in Louisville continued to experience forms of racial discrimination in the job sector and housing market. For example, Blacks served on Louisville’s police force but were only allowed to patrol predominantly Black neighborhoods. Manufacturing jobs were available to Blacks, but White business owners still tried to limit Black employment (Adams 2006). Black migrants moving out of the Deep South moved to escape virulent racism and discrimination, but they still experienced a degree of social injustice in Louisville and other Northern cities.

Another city that attracted Black migrants from the Mammoth Cave area was Indianapolis, Indiana. Like Louisville, Indianapolis was home to a growing African American community. The Recorder, established in 1898, was a prominent newspaper in Indianapolis’s African American community. It is currently the longest-published African American newspaper in Indiana, the fourth-oldest-surviving African American newspaper in the country, and is still in publication today. It may well have served as a beacon for Black migrants looking for a new home. Nine Black migrants moved to Indianapolis in 1930, but by 1940, that number had dwindled to four. While Black out-
migrants moved to Louisville and Indianapolis, few, if any, moved to larger cities such as Chicago, Detroit, and Cleveland (although small numbers of migrants moved to outlying suburbs of Cleveland). This trend is surprising because it contrasts with Ravenstein’s findings that migrants generally go to the largest centers of commerce or industry (Ravenstein 1885). In the U.S. context, it seems that second-tier cities were sufficiently industrialized to attract migrants. Indianapolis and Flint, Michigan, are two examples of important industrial centers that were home to a growing automotive industry in the Midwest. Louisville and Indianapolis acted as intervening opportunities, capturing migrants who might otherwise have headed further north to Chicago and Detroit.

Other Black out-migrants resettled in Rochester and Brooklyn, New York, by 1940. Despite some Black out-migrants moving to rural areas in Kentucky and out of state, this research overall shows a tendency among Black migrants to settle in urban destinations, likely because of the social and economic constraints that were placed on them by discriminatory practices such as de facto segregation, “Sundown Towns,” (all-white communities that excluded non-white through intimidation and violence), and other economic barriers (Loewen 2005).

Destination Type (Urban vs. Rural) by Homeownership Status

In 1930, a high number of homeowners were found in Edmonson County, a number that consists mostly of those who had not yet left the park (Figure 5.9). When these homeowners moved, many remained in rural areas in Barren and Hart Counties and in small, nearby communities such as Horse Cave, Glasgow, Cave City, Park City, and
Bristow. The numbers of migrants moving to each of these urban areas is generally proportional to their proximity to the Mammoth Cave park area, an illustration of distance decay. Other homeowners who left the park area but remained in Kentucky mostly went to Paducah or Louisville. Other cities that were destinations for homeowners were Flint, Michigan; Chicago, Illinois; Barberton, Ohio (suburb south of Cleveland); Logan, West Virginia; and Indianapolis, Indiana. The spatial pattern associated with these urban destinations was a scattered distribution that was concentrated mostly north, west, and east of the park area; most of these destinations were located in Illinois, Indiana, and Ohio, with outliers in West Virginia and Hawai’i.

Homeowners’ rural destinations by 1940 increased in number and also in distance from the proposed park area (Figure 5.10). These destinations maintained a scattered
pattern to the north, west, and east of the proposed park area, including destinations in Kentucky, adjacent states of Indiana, Illinois, and Ohio, Logan, West Virginia, Morgan and Johnson Counties in Missouri, and Winnebago County in Illinois. Urban outliers in this distribution included Lincoln, Nebraska and Hunter Township in southern Oklahoma, along the border with Texas. Rural outliers included two destinations in Missouri and two in southwestern Iowa.

Two geographical factors may account for these destinations. The first is proximity. Most destinations were in states adjacent to Kentucky. The second is accessibility. Many destinations were located along vital railroad lines between cities. The L&N Railroad had a system of rail lines oriented north to south. One line ran from Nashville through the Mammoth Cave region to Louisville before splitting into two main
lines. Indianapolis was located along the line that ran from Louisville to Chicago, and cities such Cincinnati, Dayton, and Columbus were located on the line towards Cleveland. Arteries of the L&N Railroad ran as far west as St. Louis and, through connections to other rail systems, provided easy travel as far east as New York City. The rail industry also presented employment opportunities for the Mammoth Cave region’s out-migrants. Several found jobs in the railroad stockyards of Monmouth, Illinois.

By 1940, a diverse set of cities were destinations for homeowners migrating to urban areas, mostly in Kentucky and immediately adjacent states (Figure 5.10). However, residents largely remained in Kentucky and states immediately adjacent to it. Cincinnati and Dayton in Ohio, Fort Wayne, Indiana, and Pekin and Champaign in Illinois were located along railroad lines that ran to either Chicago or Detroit. Several outliers existed, including Lincoln, Nebraska, which was located along a railroad line that ran to nearby Omaha, a major supplier of beef to the Chicago stockyards.

Other rural areas attracted former homeowners from the Mammoth Cave region, mostly counties along an arc from the proposed park area to Louisville. These rural destinations are largely located along the old Dixie Highway, a precursor to Interstate 65. Migrants also branched out beyond Kentucky’s borders, most notably in rural areas near Monmouth, Illinois. Some notable outliers include Hunter Township, in Choctaw County, Oklahoma, Vilas County in northern Wisconsin, and Mills and Fremont Counties in Iowa. The homeowner who moved to Hunter Township was the wife of a man who was a laborer with the Works Progress Administration. The migrant who moved to Vilas County was a caretaker in a person’s home. Finally, the migrants who moved to Iowa
moved to farms owned and operated by their respective heads of household. Rural destinations show the same trend of out-migrants not moving to the Deep South.

Renters were outnumbered in the sample by homeowners, but showed a similar pattern of migration (Figure 5.11). Few renters had left the park area by 1930. Those who did moved mostly to urban areas such as Louisville, Glasgow, Horse Cave, and Bowling Green. One migrant moved to Ashland, Kentucky, which had an active steel industry. This migrant married a bricklayer who worked in a steel mill. Renters moving out of Kentucky all settled in central Indiana (in rural areas and suburbs near Indianapolis), near Monmouth, Illinois, or in Brecksville, Ohio, a suburb of Cleveland.

![Map showing destinations of out-migrants from rented houses, 1930.](image)

**Figure 5.11.** Destinations of out-migrants from rented houses, 1930. (Source: Katie Algeo and Collins Eke)
By the 1940 census, renters spread to other urban areas, such as St. Louis and Hammond, Indiana, a suburb of Chicago (Figure 5.12). Two urban outliers were Rochester, and the United States Navy Yard in Brooklyn in the earliest days of World War II. No occupation was listed for the man who moved to Rochester, and the naval base became home to a man who first moved to Indianapolis, then began military service. Many renters who moved to rural areas chose places around major cities, such as rural counties near Monmouth, Illinois, and Indiana. In spite of the greater dispersion of migrants by 1940, most migrants remained in Kentucky, living in rural and mall urban areas surrounding the park.

Figure 5.12. Destinations of out-migrants from rented houses, 1940. (Source: Katie Algeo and Collins Eke)
Return Migration

Like internal migration, return migration is relevant in the case of the proposed Mammoth Cave National Park because some migrants moved away and later returned to the park’s periphery, perhaps because of their attachment to place, perhaps because of extended family in the area. Return migration was confirmed among Mammoth Cave out-migrants, although return migrants comprised a small percentage of the entire sample. Eight migrants moved away from the immediate Mammoth Cave area by 1930, only to return to Kentucky by the 1940 census. Six migrants moved back to Kentucky from Illinois, three to rural Edmonson County, outside the park, and one each to Barren County, Hart County, and Louisville. Between 1930 and 1940, Illinois experienced a net loss of nine Mammoth Cave area migrants, the majority of that number to return migration. The other two return migrants lived in Indiana for a while before returning to Kentucky. Four of the eight return migrants moved as individuals; the other four consisted of two married couples, each of whom migrated together. The Mammoth Cave area remained a source of attachment for people who once lived here, and these instances of return migration show that some migrants felt strong pulls to their home region.

Statistical Analysis Results: Difference of Proportions Tests

The 1940 destinations for successfully tracked migrants were analyzed with a series of two-tailed difference of proportions tests designed to analyze differences between urban and rural destinations among subgroups of migrants by race and homeownership status. One test evaluated: Did Blacks and Whites resettle in the same kind of area, urban or rural, in the same proportions? Another test evaluated a similar
question for migrants who left owner-occupied housing in the proposed park area and migrants who came from rental housing in that area. These tests took into account the final 1940 whereabouts, but not instances in which migrants moved to a rural destination in 1930 and then to an urban destination in 1940 or vice versa. A minority of individuals changed their destination type between 1930 and 1940, all of them White. Thirty-one changed from urban to rural, and 19 from rural to urban.

The null hypothesis for the difference of proportions tests is that equal proportions of migrants moved to urban and rural areas in each case. The alternative hypothesis would be a statistically significant difference between proportions of Blacks and Whites who migrated to urban areas, in the case of the test by race, and a statistically significant difference between proportions of out-migrants from owner-occupied and rental housing who migrated to urban areas, in the case of the test by homeownership status. Table 5.5 summarizes the results for the two-tailed difference of proportions test by race. The null hypothesis proposes that the proportion of Black migrants to urban areas (55.3%) is not significantly different from the proportion of Whites moving to urban areas (17.4%). The pooled estimate of the focus category (in this case, it is Black migrants and White

<table>
<thead>
<tr>
<th></th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Black</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>n-White</td>
<td>67</td>
<td>317</td>
</tr>
<tr>
<td>p-Black</td>
<td>0.553</td>
<td>0.447</td>
</tr>
<tr>
<td>p-White</td>
<td>0.174</td>
<td>0.826</td>
</tr>
<tr>
<td>p-hat</td>
<td>0.265</td>
<td>0.806</td>
</tr>
<tr>
<td>Σ</td>
<td>0.110</td>
<td>0.098</td>
</tr>
<tr>
<td>Z</td>
<td>3.427</td>
<td>-3.843</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.001</td>
<td>0.0001</td>
</tr>
</tbody>
</table>
migrants moving to urban areas), p-hat, was calculated to be 0.265, the standard error σ to be 0.110, and the test statistic, or Z-score, was calculated as 3.427. The Z-score was then used to find the p-value, which was 0.001.

The next step was to choose a significance level, denoted by α, and compare it to the p-value. In order to gain an accurate result from the hypothesis test and avoid misdiagnosing a null hypothesis, it is best to choose a low significance level, such as α = 0.01. For this test, the significance level of 0.01 is greater than the p-value of 0.001. If the significance level is greater than the p-value, then the null hypothesis is rejected, and the alternative hypothesis, which is that the proportion of Blacks who moved to urban areas is statistically significantly different from the proportion of Whites who moved to urban areas, is accepted. This indicates a very low probability that an equal percentage of Whites and Blacks moved to urban areas.

The second test evaluated the difference between the percentage of migrants from homeowner-occupied housing and the percentage of migrants from rental housing moving to urban areas (Table 5.6). The proportion of homeowners moving to urban areas (17.5%) was postulated in the null hypothesis to be similar to the proportion of renters (Table 5.6. Results of two-tailed difference of proportions test for homeowners and renters moving to urban and rural areas.)

<table>
<thead>
<tr>
<th></th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>$n_o$</td>
<td>41</td>
<td>194</td>
</tr>
<tr>
<td>$n_R$</td>
<td>46</td>
<td>141</td>
</tr>
<tr>
<td>$p_o$</td>
<td>0.175</td>
<td>0.830</td>
</tr>
<tr>
<td>$p_R$</td>
<td>0.246</td>
<td>0.754</td>
</tr>
<tr>
<td>p-hat</td>
<td>0.212</td>
<td>0.795</td>
</tr>
<tr>
<td>$\sigma_{p_o-p_R}$</td>
<td>0.088</td>
<td>0.045</td>
</tr>
<tr>
<td>$Z$</td>
<td>-0.814</td>
<td>1.602</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.291</td>
<td>0.111</td>
</tr>
</tbody>
</table>
(24.6%). The alternative hypothesis is that the two proportions are significantly different. The pooled estimate was calculated as approximately 0.212, the standard error as 0.088, and the test statistic Z as -0.814. The corresponding p-value was 0.2910, and constituted a failure to reject the null hypothesis at the significance level $\alpha = 0.1$. This means no statistically significant difference was found between the percentages of homeowners and renters moving to urban areas. Although a higher percentage of renters (24.6%) moved to urban areas than owners (17.5%), the difference of seven percentage points is not large enough to be statistically meaningful in the context of the sample size.

Number of Moves

The number of detected moves that each individual made between 1920 and 1940 was tallied, with three possible outcomes: no detected moves; one detected move; or two detected moves (Table 5.7). Individuals in the sample whose outmigration destinations could not be located were considered to have no detected moves and were not included in this analysis. A sampled individual whose migration destination was found for 1930, and they lived in that same place in 1940, was considered to have one detected move. Likewise, a sampled individual who remained in the park area in 1930 and whose migration destination was found in 1940, was considered to have one detected move. A

Table 5.7. Blacks and Whites making one move and two moves from Mammoth Cave National Park post-authorization.

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>One Move</th>
<th>One Move (%)</th>
<th>Two Moves</th>
<th>Two Moves (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>50</td>
<td>41</td>
<td>0.820</td>
<td>9</td>
<td>0.180</td>
</tr>
<tr>
<td>White</td>
<td>487</td>
<td>330</td>
<td>0.678</td>
<td>157</td>
<td>0.322</td>
</tr>
<tr>
<td>Total</td>
<td>537</td>
<td>371</td>
<td>0.691</td>
<td>166</td>
<td>0.309</td>
</tr>
</tbody>
</table>
sampled individual whose migration destination was found for 1930, and they lived in a
different place in 1940, was considered to have two detected moves. Obviously, it is
possible that individuals made other moves between census years, but the temporal
resolution of the decennial census limits the number that can be detected from this data
source. The number of moves that out-migrants made may reveal something about
financial stability (fewer moves) or stress (more moves).

The vast majority of the Mammoth Cave area’s out-migrants, 82% of Blacks and
68% of Whites, made one detected move between the 1920 and 1940 censuses.
Approximately 18% of Black migrants and slightly more than 32% of Whites made two
detected moves. The percentage of migrants from homeowner-occupied houses who
made two detected moves is 33%, while the percentage of people from rental housing
making two detected moves is slightly less than 30% (Table 5.8). Thus, the groups more
likely to make a single move were Blacks and renters, while the groups more likely to
make two moves were Whites and homeowners.

Table 5.8. Homeowners and renters making one move and two moves from Mammoth
Cave National Park post-authorization.

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>One Move</th>
<th>One Move (%)</th>
<th>Two Moves</th>
<th>Two Moves (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homeowner</td>
<td>300</td>
<td>201</td>
<td>0.670</td>
<td>99</td>
<td>0.330</td>
</tr>
<tr>
<td>Renter</td>
<td>225</td>
<td>158</td>
<td>0.702</td>
<td>67</td>
<td>0.298</td>
</tr>
<tr>
<td>Indeterminate</td>
<td>12</td>
<td>12</td>
<td>1.000</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Two difference of proportions tests were performed to determine whether these
differences, by race and homeownership, were statistically significant. Table 5.9a shows
the results of the hypothesis test for race. This was a test for significant difference
between the 18.0% of Blacks and 32.2% of Whites who made two moves between 1930
and 1940. The pooled estimate was calculated as approximately 0.315, the standard error as 0.159, and the test statistic Z as -0.895. The p-value for the test by race was 0.267. If compared to a confidence interval of $\alpha = 0.1$, then we fail to reject the null hypothesis of no statistical significance between the percentages of Blacks and Whites making two moves.

Table 5.9. Results of two-tailed difference of proportions test for residents making two moves based on home ownership (a) and race (b).

<table>
<thead>
<tr>
<th>(a)</th>
<th>Black vs. White</th>
</tr>
</thead>
<tbody>
<tr>
<td>$N_{b,2}$</td>
<td>9</td>
</tr>
<tr>
<td>$N_{w,2}$</td>
<td>157</td>
</tr>
<tr>
<td>$P_{b,2}$</td>
<td>0.180</td>
</tr>
<tr>
<td>$P_{w,2}$</td>
<td>0.322</td>
</tr>
<tr>
<td>p-hat</td>
<td>0.315</td>
</tr>
<tr>
<td>$\sigma$</td>
<td>0.159</td>
</tr>
<tr>
<td>$Z$</td>
<td>-0.895</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.267</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(b)</th>
<th>Homeowners vs. Renters</th>
</tr>
</thead>
<tbody>
<tr>
<td>$n_{o,2}$</td>
<td>99</td>
</tr>
<tr>
<td>$n_{r,2}$</td>
<td>67</td>
</tr>
<tr>
<td>$P_{o,2}$</td>
<td>0.330</td>
</tr>
<tr>
<td>$P_{r,2}$</td>
<td>0.298</td>
</tr>
<tr>
<td>p-hat</td>
<td>0.317</td>
</tr>
<tr>
<td>$\sigma$</td>
<td>0.074</td>
</tr>
<tr>
<td>$Z$</td>
<td>0.438</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.362</td>
</tr>
</tbody>
</table>

One reason this result is surprising that the difference between percentages of Black and White out-migrants making two moves was large (14%), yet this difference was not found to be statistically significant. This can be explained by the sample sizes. While 157 Whites made two moves, only 9 Blacks did. Smaller sample sizes engender more uncertainty in the outcome of the difference of proportions test. If this research had been able to track the migration outcomes of a greater part of the Black population of the
Mammoth Cave area, greater certainty could have been obtained. Another reason this result is surprising is that in the Depression-era economy, Black families across the U.S. tended to be less financially privileged than Whites. People who are less financially stable typically move more often. If statistically meaningful, the results of this test would suggest that Blacks in the Mammoth Cave pre-park communities were as financially stable as Whites in the area, a hypothesis supported by the selective large homeownership among Blacks in 1920. This finding supports Algeo’s (2012) contention that economic activity related to Mammoth Cave tourism created a pocket of opportunity for African Americans living on nearby Flint Ridge, a special association that was destroyed by the creation of the national park. However, limitations with the temporal and spatial resolution of the data set likely make this difference of proportions test an inadequate measure of socioeconomic stress. Many moves may not be detected by sampling only residential locations in 1930 and 1940, and intra-city migration that leaves an individual in the same census district would also not be detected by the methodology used. Thus, it is difficult to draw meaningful conclusions from the difference of proportions tests by race and homeownership for migrants who made two moves during the study period.

Results of the two-tailed difference of proportions test for home ownership are shown in Table 5.9b. The null hypothesis proposes no statistical significance between the percentages of homeowners making two moves (33.0%) and renters making two moves (29.8%). When the confidence interval $\alpha = 0.1$ is compared to a p-value of 0.362, we maintain the null hypothesis of no significant difference between the percentages of migrants from homeowner-occupied housing making two moves and the percentage of renters making two moves.
Residents Not Successfully Tracked

The analysis up to this point has been based on the 537 successfully tracked residents. The difficulty locating 318 individuals in the sample suggests that they may have experienced more dislocation or greater economic stress than successfully tracked migrants. It therefore becomes important to understand whether any racial or homeownership category was disproportionately represented in this group. Table 5.10a shows the breakdown of all unsuccessfully tracked individuals by race. Table 5.10b shows a breakdown of the data according to home ownership status. Both tables also include the results of the difference of proportions tests for each. The sample contained a total of 98 Blacks and 757 Whites. Although Whites significantly outnumbered Blacks,

Table 5.10. Results of proportions test for unsuccessfully tracked residents based on race (a) and home ownership (b).

<table>
<thead>
<tr>
<th>(a)</th>
<th>Total</th>
<th>Total in sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-black</td>
<td>48</td>
<td>98</td>
</tr>
<tr>
<td>n-white</td>
<td>270</td>
<td>757</td>
</tr>
<tr>
<td>p-black</td>
<td>0.4898</td>
<td>0.4898</td>
</tr>
<tr>
<td>p-white</td>
<td>0.3567</td>
<td>0.3567</td>
</tr>
<tr>
<td>p-hat</td>
<td>0.3768</td>
<td>0.3719</td>
</tr>
<tr>
<td>Sigma</td>
<td>0.0759</td>
<td>0.0519</td>
</tr>
<tr>
<td>Z</td>
<td>1.7538</td>
<td>2.5657</td>
</tr>
<tr>
<td>P-value</td>
<td>0.0857</td>
<td>0.0148</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(b)</th>
<th>Total</th>
<th>Total in sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-owner</td>
<td>240</td>
<td>540</td>
</tr>
<tr>
<td>n-renter</td>
<td>78</td>
<td>303</td>
</tr>
<tr>
<td>p-owner</td>
<td>0.4444</td>
<td>0.4444</td>
</tr>
<tr>
<td>p-renter</td>
<td>0.2574</td>
<td>0.2574</td>
</tr>
<tr>
<td>p-hat</td>
<td>0.3986</td>
<td>0.3772</td>
</tr>
<tr>
<td>sigma</td>
<td>0.0638</td>
<td>0.0348</td>
</tr>
<tr>
<td>Z</td>
<td>2.9308</td>
<td>5.3756</td>
</tr>
<tr>
<td>P-value</td>
<td>0.0054</td>
<td>0.0000</td>
</tr>
</tbody>
</table>
the migration destinations of Blacks were more difficult to find. Destinations were found for 50 of 98 Blacks in the sample (51%), and no destinations were found for 48 (49%). In comparison, destinations were found for 487 of 757 Whites in the sample (64.3%), and no destinations were found for 270 (35.7%). Migration destinations were not found for 240 (44.4%) of migrants from homeowner-occupied houses and 78 (25.7%) renters.

Difference of proportions tests, by race and homeownership status, were performed on sample members whose migration destinations were not found. In regard to race, the null hypothesis states that there is no statistically significant difference between the proportions of Blacks and Whites who were not located. The alternative hypothesis states that there is a difference. The analysis yielded a P-value of 0.1147, and when compared to a confidence interval of 0.1, the null hypothesis of no statistical difference between Blacks and Whites who could not be found in the 1930 and 1940 censuses is maintained. In regard to home ownership, the null hypothesis states that there is no statistically significant difference between the proportions of migrants from homeowner-occupied housing and renters who could not be found. The analysis yielded a P-value of 0.0111, and when compared to a confidence interval of 0.1, null hypothesis is rejected in favor of the alternative hypothesis, which states that there is statistical significance between homeowners and renters who were tracked unsuccessfully. The difference between homeowners (44.4% not found) and renters (25.7% not found) results suggest that homeowners were more difficult to track in the 1930 and 1940 censuses. The expectation was that the Depression-era home renters would be more difficult to track because they likely had fewer financial resources than homeowners. It is difficult to formulate a reason for this contrary finding, suggesting more study is necessary.
CHAPTER SIX: CONCLUSIONS

The data collection, map analysis, and statistical analysis yielded several distinct results, cumulatively telling a story about the movements, migration trends and whereabouts of the Mammoth Cave area’s pre-park residents. They reveal the socioeconomic effects and unintended consequences of the park’s creation. While the number of Black migrants was significantly less than that of Whites, a higher percentage of Blacks moved to urban areas than to rural areas. The results of the statistical analysis reveal a statistically significant difference between Black and White out-migrants who moved to urban areas. This result showed an instance of Black urbanization upon leaving the Mammoth Cave area. The result about racial groups’ migration behaviors indirectly shed light on the state of social justice. Racial discrimination and segregation during this time in Kentucky made life doubly difficult for Blacks to gain a stable foothold socially, economically, and professionally, especially because of the Great Depression. Blacks demonstrated a preference for urban areas because cities were more diverse places. Rural areas during this time were less welcoming as discriminatory attitudes and violence against Blacks continued.

Out-migrants from the Mammoth Cave area who remained in Kentucky generally remained near the park. They moved to rural areas outside of the proposed park boundary, in Edmonson, Hart, Barren, Warren, Grayson, and Hardin Counties. Migrants also moved to urban areas such as Bowling Green, Cave City, Horse Cave, and Louisville. Among migrants moving out of the state, the majority of destinations were in Illinois, Indiana, and Ohio, north of Kentucky, clear evidence of a degree of distance decay. The longest distance traveled within the 48 contiguous states was from Mammoth
Cave to Vilas County, in northern Wisconsin. The longest distance traveled overall was from Mammoth Cave to Honolulu in the Hawai’i Territory. Also notable was the fact that no one moved to locations in the South. A possible factor for the large number of out-migrants remaining close to the park’s periphery could have been the desire to live as close to their former homes as possible, possibly because extended family remained in the area.

Although the sample contained a larger number of homeowners than renters, a higher percentage of renters moved to urban areas than homeowners perhaps because renters did not receive compensation for moving from the park as homeowners did. Homeowners were compensated for the sale of their homes and land. The money they received could go towards purchases of new farms elsewhere. Renters were more likely to find rental units in larger cities. However, statistical analysis revealed no statistically significant difference between the percentages of homeowners and renters who moved to urban areas.

The analysis revealed a greater likelihood of Whites moving twice during the park creation period than Blacks. The difference of proportions test did not show a statistically significant difference between the proportions of Blacks moving twice and Whites moving twice, although methodological deficiencies in capturing all moves suggest that this result should be verified via other data sources before being accepted. Specifically, the temporal resolution of the census prevented all moves by out-migrants between census years from being documented. If this result is ultimately overturned through more precise data and analysis, it would indicate that Blacks made fewer moves than Whites as a result of forced out-migration from the park area. That could indicate either greater
financial stability or less choice in housing. Uncertainty surrounding this result and its meaning suggest the need for further study of migration patterns and processes during the lull between the two waves of the Great Migration.

This study demonstrates that micro-scale investigation of human migration in the wake of national park creation is possible. However, to understand the greater consequences, intended or not, of national park creation, more research is needed. This research revealed one main unintended consequence of the no-resident policy. It contributed to a rise in urbanization among former residents of the Mammoth Cave area, especially Blacks, in major cities in the north. Moreover, this urbanization occurred during a lull in the Great Migration, suggesting that the main trend of that mass migration continued, even during the less active period of the 1930s. This research on Mammoth Cave National Park provides an example for similar research that could be conducted about the creation of other national parks, with a goal of understanding whether urbanization was part of a broader consequence of the park policy of displacement.

Finally, the eventual release of the 1950 manuscript census will help researchers learn about more about the out-migration history of the Mammoth Cave area’s displaced residents and how they adapted in the years after park creation.

Out-migration from the Mammoth Cave region during national park creation is one of many subjects obscured in the history of Kentucky and, by extension, our nation’s history. The preservation of natural lands and cultural landmarks was meant to provide people with a means to use them for leisure and educational purposes, and to enjoy their beauty and splendor, but the process has created difficult, and in some cases contentious, situations for residents of these lands. In many ways, Mammoth Cave National Park is
not unlike any other park or protected area that has experienced a long process of park creation, with short- and long-term consequences.
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