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#### The Geography of Inequality: A Spatial Assessment of the Socioeconomic Dynamics of Inequality in Memphis, TN

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# The Geography of Inequality: A Spatial Assessment of the Socio-economic Dynamics of Inequality in Memphis

by

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#### **Report**

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The University of Texas at Austin, 2010

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Like many other cities Memphis has been hit hard by the economic downturn, but unlike other cities there are several other factors which cause the existing conditions in Memphis to be even more devastating. Memphis is one of the largest majority minority cities in the country with high rates of unemployment and, extremely high rates of crime.

Foreclosures have ravaged the housing stock, graduation rates are far below the state goal, there are huge disparities in income and HIV/AIDS is on the rise at alarming rates. In Memphis, these factors combine to exacerbate the existing desert of opportunity that reproduces patterns of desolation, segregation, and social and economic disparities. This report aims to investigate the socio-economic dynamics of those areas most affected by inequality in an effort to understand the correlation between various factors, identify trends within those areas and assess how the interaction of various components could have potentially detrimental effects on the overall community

#### **Table of Contents**

Acknowledgements	iii
Abstract	iv
List of Tables	vi
List of Figures	vii
Introduction	1
Chapter 1: Housing Inequality and Opportunity	7
Urban Inequality	8
Housing Inequality	11
Housing Discrimination	14
Relationship between Housing Inequality and other Types of Inequality	21
Opportunity, Inequality and Life Chances	24
Chapter 2: Memphis Inequality	29
Memphis History	
Chapter 3: Methods	49
Literature Review	49
Communities of Opportunity Framework	49
Spatial Analysis	51
Chapter 4: Findings and Analysis	64
Chapter 5: Discussion	94
References	103

#### **List of Tables**

#### **Tables**

- Table 1: Federal Housing Legislation
- Table 2: Deaths Attributed to Social Factors
- Table 3: Median Home value Comparisons
- Table 4: Annual Area Unemployment Statistics
- Table 5: Economic Development Budget Comparisons
- Table 6: Tennessee School Districts with the Most Schools Classified as High Priority
- under NCLB 2011-2012
- Table 7: Memphis Public High School Graduation Rates
- Table 8: Housing Inequality Index data Matrix

#### **List of Figures**

#### **Figures**

- Figure 1: the Interactions of Systemic Disadvantage and Inequality
- Figure 2: Memphis Demographics
- Figure 3: Racial Distribution of Poverty in Memphis
- Figure 4: African American Poverty in Tennessee
- Figure 5: Memphis Unemployment
- Figure 6: Memphis Median Family Income
- Figure 7: Memphis Own-Occupied Housing
- Figure 8: Memphis Renter-Occupied Housing
- Figure 9: Memphis Vacant Housing
- Figure 10: Memphis Median Home Value (White Population)
- Figure 11: Memphis Median Home Value (Black Population)
- Figure 12: Memphis Housing Inequality Index
- Figure 13: Housing Inequality and Demographics Comparisons
- Figure 14: Housing Inequality and Poverty Comparison
- Figure 15: Housing Inequality and Unemployment Comparison
- Figure 16: Housing Inequality and Median Family Income Comparison
- Figure 17: Housing Inequality and Female Educational Attainment Comparison
- Figure 18: Housing Inequality and Male Educational Attainment Comparison
- Figure 19: Housing Inequality Index and Multiple Inequality Index Comparison

#### Introduction

Memphis is a city rich in history that sits on a bluff overlooking the Mississippi River. The original translation for the term Memphis is "place of good abode." In its early days Memphis was a place of great opportunity due to its proximity to multiple transportation systems, but for minorities (African Americans particularly) Memphis did not share such promise. During the nineteenth century, Memphis was considered the home of "King Cotton," also referred to as "the white man's gold." The cotton industry in Memphis just as in other cities across the country relied fully on the free labor of African slaves. At one point Memphis was known as home to the largest cotton industry in the world, which is an indication of how critical this institution was to the economy of this southern city. Memphis was also very active during the Civil Rights Movement and arguably suffered its saddest day when Dr. Martin Luther King was assassinated.

Needless to say, this city has seen its share of cloudy skies, but it has also shined its light all over this nation. Memphis not only gave birth to the modern day supermarket, but inspired some of the world's best musical talent such as Elvis Presley. Unfortunately this place of unlimited potential slowly deteriorated into a desert of opportunity. Although Memphis was built on a foundation of endless potential, the city is currently in the midst of a crisis. Like many other cities Memphis has been hit hard by the economic downturn, but unlike other cities there are several other factors that make the existing conditions in Memphis even more devastating. Memphis is one of the largest majority minority cities in the country with high rates of unemployment and, extremely high rates of crime.

Foreclosures have ravaged the housing stock, graduation rates are far below the state goal, there are huge disparities in income and HIV/AIDS is on the rise at alarming rates. In Memphis, these factors combine to exacerbate the existing desert of opportunity that reproduces patterns of segregation and social isolation with especially severe consequences for African Americans. Research has shown that minorities and low-income populations are disproportionately affected by various types of social and economic inequalities which profoundly reduce access to critical opportunities such as quality housing and education, income distribution, unemployment and poverty.

This report will primarily focus on housing inequality within the city of Memphis and assess the significance of the spatial relationship between housing and the social and economic inequalities mentioned above. In the context of this report, housing inequality is defined as the unequal spatial distribution of housing characteristics that influence access to high opportunity structures such as housing vacancy, median home values and owner occupancy. This report reviews a body of empirical research and applies spatial analysis techniques using geographic information systems (GIS) in order to understand the relationship between housing inequality and other factors that influence life chances. Spatial analysis allows us to conceptualize socio-economic dynamics in a clear and concise manner. This tool allows us to identify which communities lack opportunities as well as some of the factors that can either create opportunities or isolate certain populations from those opportunities. Finally, analyzing and measuring access to opportunity can serve as a critical tool in assessing possible solutions.

In our society, access to opportunity depends to a large degree on levels of income. Higher income equals greater access and lower income limits opportunity. This economic structure often isolates low-income families from gaining access to critical opportunities that can enhance a person's life chances. Numerous studies show that communities which are predominately minority and low income tend to have greater challenges accessing fundamental components which influence critical opportunities (Adelman, Jaret, & Reid, 2003) (Darden, 1989) (Howell, 2006). In Memphis some areas have poverty rates as high as 84percent. Research indicated there is a correlation between neighborhood poverty and adult employment that results in labor market disadvantages (Holloway & Mullherin, 2004). This pattern of blocked access holds true for other types of opportunities for residents of poor neighborhoods.

In other words, access to opportunity - that is, positive assets that can enhance life chances such as sources of education, jobs and social services- is not equal. Where you live can significantly limit your access to opportunity. In particular, minorities, low-income populations and others who live in areas that are disproportionately poor tend to have substantially limited access to opportunity, and this lack of access to opportunity in turn- significantly limits the life chances of the individual and families who reside in these areas. Without equal access to opportunity certain populations will continue to be underrepresented and marginalized which will promote a society that is segregated, exclusive and inequitable. In particular, I hypothesize that access to adequate housing is

an indicator of opportunity, and the lack of good quality housing is correlated with other indicators of lacking opportunity.

It is generally assumed, that the most impoverished areas have the worst housing conditions and poorest neighborhood quality. Studies have showed a strong relationship between housing location and conditions and a variety of other socio-economic factors such as, mental health, child mortality and school quality (Uehara, 1994) (Brennan & Lancashire, 1978) (Jud & Watts, 1981). The purpose of this report is to spatially identify the areas in Memphis that are disproportionately affected by inequality particularly in measures of housing inequality. Here housing inequality is defined as the unequal spatial distribution of housing characteristics that influence access to high opportunity structures such as housing vacancy, median home values and owner occupancy. Because housing location and conditions are so closely related to many other types of inequality, this report assesses the spatial relationship of housing to other indicators of inequality. Ultimately, the objective of this report is to explore the dynamics of housing inequality in order to understand the relationship between housing inequality and access to opportunity. This report aims to investigate the socio-economic dynamics of those areas most affected by inequality in an effort to understand the correlation between various factors, identify trends within those areas and assess how the interaction of various components could have potentially detrimental effects on the overall community. The goal is to identify the spatial distribution of race, poverty, unemployment, income and

education and illustrate possible patterns or overlap among these factors which could possibly indicate concentrations of inequality.

This report seeks to answer the following questions:

- 1. Is housing inequality disproportionately distributed throughout the city of Memphis?
- 2. Does housing inequality spatially affect areas with higher minority populations disproportionately?
- 3. What is the spatial relationship between housing inequality and other types of inequality in access to key components of opportunity?

It is the goal of this research to identify critical trends and spatial relationships related to housing inequality and other types of inequality. This report identifies information intended to be useful to outreach organizations working to alleviate the spread of inequality in the city of Memphis.

To determine relative levels of inequality in Memphis, I draw on the model for 'opportunity mapping' developed by the Kirwin Institute for the Study of Race and Ethnicity at Ohio State University. The model was developed in order to assess where opportunity-rich and opportunity-poor communities exist, and uses spatial data such as education levels, health, income, crime levels and other indicators to identify what areas are most affected by limited opportunity. The Kirwin Institute has employed this technique to research a variety of social justice issues in multiple cities. Under the direction of John Powell, the Kirwin Institute for the Study of Race and Ethnicity has

provided invaluable research to city agencies and organizations across the country. This model is an important example of research approaches used to examine the relationship between spatial and social inequality in urban areas, and is relevant for planning practice that aims in the development of marginalized communities.

In the following chapter, I will review current research in the area of housing, spatial inequality and opportunity, to show the important relationships between these three factors and how they articulate to shape social injustices. In Chapter two I present a short history of Memphis in order to show the processes that led to the unequal, spatial pattern of housing quality and opportunity we can observe today. After this, in Chapter three I discuss the methods I used for my spatial analysis, where I drew in particular on Geographic Information Systems tools and analysis approaches. I present my findings and analysis in Chapter four, both in the form of a series of maps and a discussion. I conclude in Chapter 5 with a discussion of the results and the implications of my research for urban planning, especially in context of the work for social justice and fair distribution of opportunity.

#### **Chapter 1: Housing Inequality and Opportunity**

Inequality within the urban structure can be expressed in a variety of ways including disparities in the quality of education, the distribution of income or neighborhood quality. Many of these inequalities can be identified spatially through the concentration or clustering of certain dynamics within particular geographical areas. When assessing housing inequality it is critical to account for its influence on other areas of life and relationship to other factors that compound the problems caused by inequality. It is important to review how housing inequality specifically limits opportunities and affects the life outcomes of various populations.

In this chapter, I will provide an introduction to the literature on urban inequality, with a particular focus on housing inequality. In the context of this report, urban inequality refers to disparities among cultural groups within urban areas. A cultural group can be interpreted as a collective of individuals who share common beliefs, ideas, experiences, knowledge, attitudes and behaviors. Housing inequality is defined as the unequal spatial distribution of housing characteristics that influence access to high opportunity structures such as housing vacancy, median home values and owner occupancy. The purpose of this chapter is to understand the dynamics of housing inequality and how these dynamics relate to other types of inequality. This chapter also reviews housing discrimination and how inequality relates to life outcomes.

The first section of this chapter will discuss urban inequality in general. This section looks into differences among various populations in urban areas. The objective is to identify how urban inequalities generally affect access to opportunities in urban areas. The next section of this report will discuss housing inequality specifically. This section explains what dynamics are encompassed by the concept of housing inequality. This section also discusses what factors influence the quality of housing. This chapter also reviews how different populations are affected by housing inequality. The next two sections of this report talks about housing discrimination and the role it plays in housing inequality. These sections also look at how minority populations are affected by housing discrimination and the new types of programs that have discriminatory impacts on the surrounding communities. He following sections identifies the correlation between housing inequality and other types of inequality. The final section of this chapter assesses how inequality limits opportunity and affects life outcomes.

#### **Urban Inequality**

Urban inequality is correlated to racial inequality in many ways and can be broken down into several components such as income distribution, educational attainment, unemployment, residential segregation, suburbanization and the distribution of poverty just to name a few. These inequalities perpetuate and exacerbate social injustices and impede the ability to achieve equity in access to opportunity in urban communities. Joe T. Darden wrote about African American inequality within the urban structure of the United States over twenty years ago. He stated that inequalities between whites and African

Americans are reinforced by residential segregation in metropolitan areas and low African American suburbanization resulting from persistent racial discrimination in housing (Darden, 1989). During this period many jobs and other opportunities were moving out to the suburbs, but due to residential discrimination blacks were often left in the inner city communities which significantly limited access to high opportunity structures.

Today racial discrimination in housing still exists, but it has evolved over time. Thirty years ago the practice of excluding minorities from settling in certain areas by refusing financial assistance based on race or economic status also known as redlining, was a major barrier to obtaining housing for minorities. Today the practice of systemically targeting populations based on race and economic status and encouraging these populations to take out subprime loans, referred to as reverse redlining is a major problem in economically disadvantaged communities and communities of color. It is important to understand how various types of inequality interact to further reduce access to opportunity. The interaction of certain factors can create and exacerbate inequality. The figure below illustrates how various types of social inequality relate to and are connected to systemic disadvantage. Many of the disparities that produce social and economic inequality can be linked to social factors such as racial stigma.

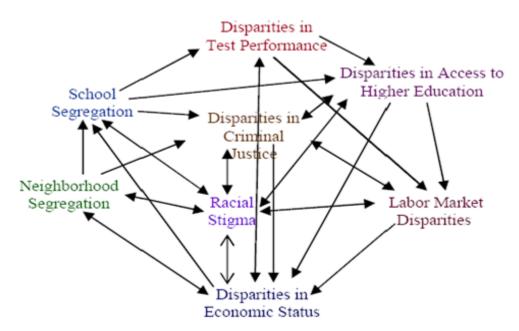


Figure 1: The Interactions of Systemic Disadvantage and Inequality

Source: Barbara Reskin. http://faculty.uwashington.edu/reskin/

The foundation of many issues relating to inequality stem from social disparities deeply rooted in our country's history. These disparities are not always as evident as we might believe. Conventional wisdom proposes that increasing income is the most direct way to escape from inequality, but education efficient means to increasing earning potential, thus reducing many forms of inequality. For individuals and families who reside in communities that are affected by inequality the barriers are evident, but the escape from inequality often seems complex and distorted. In order to alleviate inequality we must resolve that which causes inequality. By reducing social disparities we may be able to affect social change and promote equity and social justice.

#### **Housing Inequality**

"Housing inequality" is one of the most significant indicators of inequality. In this report, "housing inequality" refers to the unequal spatial distribution of housing quality throughout the city, and also whether your home provides you with financial security, whether your housing conditions expose you to health risk, what types of amenities your housing has, and how accessible it is to fresh foods and public service facilities. The consequences of housing inequality can vary, but some outcomes include limited access to high quality schools, limited access to fresh foods, concentrations of poverty, exposure to environmental toxins, inability to develop wealth.

Where you reside, therefore, defines in many cases the opportunities you experience as well as the challenges you confront. As we work towards developing more inclusive and integrated communities, we have seen considerable progress. Owner-occupied housing among minorities, particularly Black and Hispanics, has increased substantially over the last few decades which can improve the life chances of these populations. However, alarming disparities in housing quality still persist between racial and ethnic groups. Studies show that differences in household resources (particularly income) are the most important source of inequality between minorities and whites in both homeownership and housing equity (Flipen, 2001). Considering that homeownership is likely the largest investment a family will make, disparities in home ownership perpetuate economic stratification by limiting the accumulation of wealth for disadvantaged groups (Rosenbaum, 1996). With little or no opportunities for wealth accumulation,

marginalized populations continue to have very limited purchasing power. This is significant because purchasing power allows families to invest in other opportunities that can enhance their quality life, as well as establish other means to promote economic security. Prior studies have shown that housing quality was positively related to occupational status, degree of owner occupancy and education.

In order to offer a better quality of housing to families with limited purchasing power, affordable housing policies have been instituted. "The President's Committee on Urban Housing estimated that nonwhite (mainly black) families need two to three times as much assistance as white families in order to purchase decent housing" (Meyer, 1973). Although affordable housing policies grant access to a better quality of housing and access to greater opportunities for low income and historically disadvantaged groups, affordable housing policies that grant poor or minority families access to higher income areas have faced opposition. This opposition is due in most part to the perceived threat to property values in the neighborhood (Mueller & Tighe, 2007). This fear of decreased property values produces generalized community resistance to integration (Duke School of Law, 1969). In many parts of the country white homeowners believe that the introduction of non-white property owners into their neighborhoods will cause an automatic decline in property values, which is frequently justified as being a rational and non-prejudicial attitude toward the problem of integrating housing (Dwyer, 2007). Currently there is no evidence to suggest that affordable housing decreases proximate property values. Built on the premise of this myth, more affluent populations have found

refuge in suburban areas, gated communities and concentrated developments. Rachel Dwyer stated "affluent segregation in concentrated developments of new housing may be a form of racial distancing achieved through economic means." She goes on to discuss the role of new housing in converting social distance into spatial distance (Dwyer, 2007).

Disparities in housing have a lot to do with geography, and therefore it is important to assess how inequality is distributed spatially. There is evidence that for both blacks and Hispanics, high levels of neighborhood minority concentration undermine housing appreciation (Flippen, 2004). The location of housing is also critical in terms of access to other opportunities or types of inequality. Because the location of housing influences access to advancement opportunities, housing inequality also contributes to the perpetuation of stratification. Housing location influences access to education, political power and social networks (Dwyer, 2007).

Because housing is so critical to the well-being of the city, those in leadership positions are confronted with a complex challenge. To make the housing inequality problems of urban communities even more complex, there are other invisible barriers that place limitations on available housing options in urban areas. Many studies have assessed the external constraints to minority housing choices, but few had addressed the internal causes that constrain the housing choices of minorities. Studies find that blacks and Hispanics are unlikely to move into white vacated units, or into units located in predominantly white subareas. "This reflects the micro level dynamic that sustains

aggregate spatial patterns but also indicates that frequent and informal social contact across racial and ethnic boundaries is restricted beyond the limits placed by differences in economic status" (Rosenbaum, The Constraints on Minority Housing Choices, New York City 1978-1987, 1994).

#### **Housing Discrimination**

Housing continues to illuminate the social challenges we face in our society. Although there are many explanations for the differences in housing quality between whites and minorities, the most compelling research suggests that housing discrimination plays a profound role in perpetuating these differences. This section aims to address different types of inequality and identify the populations that are most affected. The goal is to provide an overview of housing discrimination historically in our society. By briefly reviewing federal legislation towards housing discrimination we can obtain a general understanding of the role of federal government in the crisis of housing discrimination. This chapter will also review how housing discrimination has evolved into programs and practices that have discriminatory impacts on surrounding communities.

In a study regarding the history of renting, Donald Krueckeberg stated that in this country there is a stigma of not owning property that is associated with being poor, transient, and politically suspect. He goes on to say that the celebration of homeownership in the United States stigmatizes those who don't, can't, or won't buy property (Krueckeberg, 1999). This stigma creates a negative attitude towards renters within the community. The most

common example of the effects of this stigma is expressed in the opposition of multifamily housing developments being built in single family neighborhoods. One study that
tested the connection between land use controls and the racial composition of the
communities affected by those controls found that low density zoning regulations
consistently reduced rental housing which as a result, limited the number of Black and
Hispanic residents (Pendall, 2000). Douglass Massey accurately described racial
discrimination in housing as a "moving target" (Dwyer, 2007), he went on to say that
when older discriminatory mechanisms based explicitly on race are no longer sustainable,
whites will substitute new ones that are more subtly associate with race. The findings of
Pendall's study vividly illustrate this practice. In the case of Pendall's study the
mechanism of choice were low-density zoning regulations, unfortunately proving the
intent of discrimination using such mechanisms is challenging to prove. Fortunately this
type of study has provided a conduit to assess discriminatory tactics in a new light.

Historically, housing discrimination studies focused on discriminatory tactics used to prevent or deter minority buyers from purchasing properties within a certain areas.

Currently housing discrimination is often implemented by displacing certain populations and other forms exclusionary practices. Few studies have investigated what Roscingo, Karafin and Tester refer to as nonexclusionary discrimination. Nonexclusionary discrimination refers to forms of discrimination that occurs after a family or individual is housed such as differential treatment, harassment, intolerance and things of that nature (Roscigno, Karafin, & Tester, 2009). Results show that African American women are

most likely to face housing discrimination for several reasons including sex, race, class and status as mothers (Roscigno, Karafin, & Tester, 2009). Stereotypes and misguided perceptions fuel discriminatory practices.

Sociologist Erwin Goffman stated "We believe that the person with the stigma is not quite human. On this assumption we exercise a variety of discriminations, through which we effectively, often unthinkingly, reduce his life chances. We construct a stigma theory, an ideology to explain his inferiority and account for the danger he represents . . . ." (Sidel, 1996).

Over the years the federal government has made significant attempts to illuminate discriminatory practices within our society. The table below summarizes legislation over the last century that has helped to reduces overt discrimination (Table 1). Legislation has played an important role in combating discriminatory practices. The main goal of many federal laws directed towards housing is to ensure that all citizens have a decent quality of housing that provided adequate shelter and security. Although federal housing legislation has made tremendous strides towards promoting equity and equality in housing, there is yet more work to be done. The Department of Housing and Urban Development offers a variety of programs to level the playing field in terms of housing quality, but as we have found there are many other components involved in this housing conundrum. In order to reduce these disparities and alleviate the issues associated with housing of today, we must be inventive, targeted, original, resourceful and ingenious in our approach to the housing policies of tomorrow.

**Table 1: Federal Housing Legislation** 

Year	Legislation	Description
1949	Housing Act	This Act provided federal financing for slum clearance programs often associated with urban renewal efforts, provided funds to build public housing units, funded housing research and research and granted more authority to the Federal housing Administration among other things.
1962	Executive Order on Non- Discrimination	This order states HUD and other executive departments cannot implement discriminatory practices as it relates to properties that are owned or operated by the federal government or receives federal funds
1964	Title VI of the Civil Rights Act	Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, and national origin by entities receiving federal financial assistance. This section of the Act seeks to alleviate intentional discrimination
1968	Title VIII of the Civil Rights Act	Title VIII of the Civil Rights Acts also known as the Fair Housing Act, prohibits discrimination of the financing, sale or rental of housing based on color, race, religion, ethnicity, sex or national origin.
1994	Executive order on Equal Opportunity in Housing	As amended, this order states that programs and activities relating to housing and urban development must be administered in a manner that further the purpose of the Fair Housing Act and must cooperate with the secretary of HUD.
1994	Executive Order on Environmental Justice	This order states federal agencies must implement policies and services that relate to human health and/or the environment in a way that does not discriminate or exclude persons on the basis of race, color, ethnicity or national origin

Data Source: www.hud.gov

Currently discrimination is housing is no longer a blatant barrier. New programs have developed that often appear to have discriminatory effects almost exclusively on low-income and minority communities. Urban renewal and gentrification are two examples of such programs.

Urban renewal began as a program or process of land redevelopment. The idea was to get rid of blight in the urban community and restore order and function and in many cases, encourage development that would aim to promote economic growth. The rationale and intentions of urban renewal in its origins were designed to promote the overall well-being of the city however; even programs with the best intentions can be tarnish when abused.

"Some critics of the urban renewal program have pointed to the dysfunctional aspects of the relocation process. They have alleged "negro removal," the breaking up of neighborhoods, and badly handled rehousing of relocates" (Spiegel, 1964). A study performed by Linquist and Barresi suggests that the negative attitudes towards urban renewal may undermine its fundamental principles. The absence of friendships and neighboring in these communities imply are divided as a social community (Lindquist & Barresi, 1970). When measuring relationships using a more advanced scale of intimacy they found a general lack which reinforced the generally disorganized nature of this area. In addition to the negative attitudes associates with "negro removal," gentrification has also been targeted as another programs that results in the displacement of low-income and minority populations.

There are many arguments both for and against gentrification. When assessing housing and other types of inequality is it easy to identify the negative aspects of this program, it is also important to consider the potential positive effects of gentrification as it is applied to communities today. For example, some researchers argue that the increases in the local tax base could possibly improve the quality of local schools and services and other goods. Another argument is that more affluent populations may increase employment opportunities in certain industries (Vigdor, Massey, & Rivlin, 2002). Although both of the previous arguments are well founded and support the enhancement of community development, it is critical that we ask ourselves the question "are only communities with affluent populations entitled to quality schools, goods, services and jobs". In their article,

Vigdor, Massey and Rivlin suggest that gentrification may also decrease the concentration of poverty, though evidence of this is limited (Vigdor, Massey, & Rivlin, 2002).

Because our cities are so diverse gentrification affects different cities in different ways. It is my hypothesis that in many communities, the concentration of poverty is not ameliorated but rather moved to another area as people are displaced over time. Although some findings determine that census tract data suggest gentrification promotes the socioeconomic integration of metropolitan areas, such findings are subject to interpretation, since integration (as history has shown) encompasses much more than proximity or shared space. Some researchers have stated that downtowns are being converted into bourgeois playgrounds (Smith, 1982) that continue to intensify exclusion and other socio-economic barriers within our communities.

There are also practices unrelated to land use and development that are both intentional and targeted towards minorities and low-income communities. These practices involve financial institutions and defined as subprime lending and reverse redlining. The practice of subprime lending and reverse redlining is a reflection of the exploitation of historically marginalized groups. Predatory lenders systematically target certain populations and fraudulently pursue borrowers to take out subprime loans. "The most disturbing aspect of the rapid rise of subprime and predatory lending is its significant racial and geographic

concentration (Howell, 2006)". These practices have devastated the real estate market and cause significant damage to the national economy.

The fiscal impact of these practices across the country is outrageous. The fact that the most vulnerable communities were targeted makes these acts even more upsetting. Blacks are five times more likely to take out a subprime loan than whites (Howell, 2006). These statistics are not the result of mere coincidence; rather it is the evidence of discrimination. "Although geographic discrimination alone is not actionable under the Fair Housing Act (FHA or Title VIJI),18 if a lender exploits historic racial segregation by marketing higher-priced loans to minority neighborhoods to profit from borrowers' lack of other options, such profiteering may constitute actionable housing discrimination (Howell, 2006)". Redlining is defined as refusing financial assistance based on race or ethnicity and economic status. Today those same communities are targeted and extended unfair terms for financial assistance. As a result, many of the communities hit hardest by the recent foreclosure crisis were communities of color.

Subprime lenders are not the only ones aware of the geographic areas that are highly populated with minorities. Many members of the white populations are electing to leave urban areas for the more homogenous suburban landscape. This social phenomenon has been defined as white flight. White flight is the social phenomenon where whites migrate out of urban areas with large minority populations to more homogeneous sections of the city or its outskirts. Conventional wisdom suggests white flight exacerbates residential

segregation and impedes the development of more equitable and inclusive cities. Legal exclusion, urban decay and desegregation all paved the way (among other things) for white flight to emerge in our society. Once placed into the historical context of our country, it is not unreasonable to assume or speculate that the core of this phenomenon is rooted in a history of intolerance, prejudice and fear. Some studies suggest that white flight (in its most basic form) is a defining factor of the U.S. urban landscape (Crowder & South, 2008).

Urban renewal, gentrification, subprime lending, reverse redlining, and white flight have all been redeveloped within the last few decades. These are the new mechanisms Massey and others have warned us about. All of these practices are subtly associated with race. In order to discontinue discrimination in our society we must look for the "moving targets." Since these practices are no longer overt violations of civil and human rights, we must be vigilant in order to identify these new and insidious tools to reproduce housing inequalities in our cities.

The Relationship between Housing Inequality and Other Types of Inequality

Housing inequality is linked to many other types of inequality. This includes education,
income, employment and poverty just to name a few. Negative associations with either of
these components can create a toxic relationship to other factors that also influence
inequality such as health and crime. For example, "due to higher rates of exposure to

abandoned building for black and Hispanic families, these populations are at risk of also being exposed to higher levels of crime, adverse health conditions and economic decline associated with physical decay" (Skogan, 1990). In addition to the location of housing, the condition of housing can also cause families to be more vulnerable to undesirable environments which can limit maximum academic performance.

Housing conditions have the potential to strongly affect a child's ability to perform academically and adapt socially" (Mueller & Tighe, 2007). There are many components that can inhibit a child's ability to adapt and perform. Beyond issues associated with in the housing unit there are other housing-related issues that also affect school quality and thus affect children such as property taxes. Property taxes is the most common primary funding source for public schools, therefore property values can dictate the quality of public schools (Jud & Watts, 1981). Numerous studies show that the quality of public schools is an important determinant of residential property values. Lower property values produce fewer taxes thus providing less funding for schools. Assuming residential inequalities are correlated to school inequality due to unequal funding, where you reside in many ways can dictate your educational opportunities which ultimately influence you occupational opportunities. "There is recent evidence that suggests wealth and residential inequalities reinforce racial stratification based on their ability to influence educational and occupational opportunities" (Oliver & Shapiro, 1995). Numerous studies have suggested that limited employment opportunities and job discrimination are correlated to housing segregation. The inability of families to purchase quality housing is due to low

economic status (Rosenbaum, 1996). As I mentioned earlier, purchasing power is a key indicator of housing quality. Wealth inequality stimulates housing inequality, "as such, housing inequality contributes to racial and ethnic inequality in wealth accumulation more generally" (Kain & Quigley, 1972). Poverty can be conceptualized as the opposite of wealth. When we think of poverty we often think of inadequate housing among other things.

Merriam-Webster defines poverty as lacking money or material possessions (Merriam-Webster, 1997). This "state of lack" has various levels from financial insecurity to absolute lack of housing. Assuming home ownership is the most common way to accumulate wealth which is often described as getting "a piece of the American pie," many disadvantaged groups seek to achieve homeownership as a form of validation and achievement despite all odds. However, even when marginalized populations attempt to realize the American dream of home ownership they are instantly confronted with the harsh realities of class in our society. Due to housing choice constraints individuals living in poverty are often clustered or concentrated spatially into certain areas. "Concentrated poverty has the largest deleterious impact on housing values of all the neighborhood characteristics considered, and explains a large part of neighborhood racial and ethnic inequality in [housing] appreciation" (Flippen, 2004). The concentration of poverty is not the only factor that negatively impacts housing wealth; concentrations of minorities also have a negative impact (Flippen C., 2004).

When confronting the complexity of inequality it is critical that we are comprehensive in our approach to eradicating this web of disparities. Melvin Webber stated it best when he said "the marriage of the social sciences and planning profession holds out the promise that a new level of intelligence will be merged with noble purpose, in confronting the problems and the opportunities of the day" (Webber, 1963).

#### **Opportunity, Inequality and Life Outcome**

Opportunity, inequality and life outcomes are strongly interconnected. Those who have unlimited access to opportunities tend to be less affected by inequality and their life outcomes seem to have fewer barriers and limitations which allows these individuals to experience a greater quality of life. On the other hand, people who don't have access to fundamental opportunities tend to be more affected by inequality and as a result experience more barriers and obstacles when attempting to obtain a decent quality of life. Because we are aware of this relationship we as planners, policy makers, social workers etc., have a social responsibility to try and find solutions to the problems that compromise the well-being of our communities.

John F. Kennedy said "all of us do not have equal talent, but all of us should have an equal opportunity to develop our talents." In this country we believe that everyone has the power to define his/her own destiny, but we often omit to acknowledge the systemic and institutional barriers which impede the ability of many individuals to obtain this power. Opportunity can be defined as a favorable condition that enhances a person's

ability to attain a goal; it is the position that allows a person to have a chance to advance or obtain success. Within the context of this report, opportunity refers to a combination of components and/or conditions which create a structure that has a significant influence on an individual's life outcomes. High opportunity structures consist of diverse communities, limited housing vacancy, low unemployment rates, quality schools and an equitable distribution of income just to name a few. Low opportunity structures are the direct opposite; these areas contain excessive vacant housing, poor schools, dilapidated housing, high rates of poverty and unemployment.

The Kirwin Institute defines low opportunity structures as the interaction of components which create obstacles and/or barriers along an individual's pathway to success. A pathway to success is defined as high- quality education, healthy and safe environments, stable housing, sustainable employment, political empowerment, outlets for wealth-building and positive social networks. Low opportunity structures are more specifically described as areas with high rates of poverty, poor employment, underperforming schools, distressed housing and health/safety risks. According to the Kirwin Institute low opportunity structures limit the development of human capital. In contrast, the Kirwin Institutes defines high opportunity structures as the interaction of favorable conditions that foster success. High opportunity structures consist of safe housing conditions and, high performing schools, which in turn aid the development of social capital and, help create positive social networks and sustainable employment (kirwaninstitute.org).

Based on "systems thinking" developed by the Kirwin Institute, these opportunity structures interact in ways that produce racialized and different outcomes for different groups. It is essential that we assess the impact of limited opportunity in order to ensure an equitable and inclusive society. In particular, it is important to consider the role that unequal access to quality housing plays in shaping the social and economic outcomes of American families and children (Ross & Austin Turner, 2005).

Low income, dilapidated housing, high criminal activity, poor schools and unemployment all interact to create a desert of opportunity which often has detrimental effects on the life outcomes of the individuals who grow up in such environments. Although there are some individuals who use their poor opportunity structures as motivation to escape the grips of poverty, many others seem to find themselves trapped in an ongoing cycle which restricts their ability to progress and even has serious health implications. A study published by the American Journal of Public Health indicated that a substantial number of deaths in the US are attributable to social factors. Low education, for example was attributed as the cause of over 50,000 more deaths than myocardial infarction which was the leading cause of death in 2000 when this study was conducted. Racial segregation accounted for over 8,000 more deaths than cerebrovascular disease, which was the third leading cause of death in 2000 (Galea, Tracy, Hoggatt, & DiMaggia, 2011). The table below estimates the number of deaths in the United States in the year of 2000 that are attributable to social factors (Table 2). This table indicates that low education is attributable to more deaths than any other social factor. Earlier in this section we discussed the correlation between housing and schools. Minorities and low-income populations particularly vulnerable in many of the cases listed within this table.

Table 2: Deaths Attributable to Social Factors in 2000

Social Factor	Deaths Attributed to Social Factor
Low Education	245,000
Racial Segregation	176,000
Individual Level Poverty	133,000
Income Inequality	119,000
Area Level Poverty	39,000

Data Source: (Galea, Tracy, Hoggatt, & DiMaggia, 2011)

Another article describes the life chances of residents who reside in the ghetto particularly the limitations in their ability to accumulate wealth. "This represents yet another example of how structural conditions impede the ability of minority Americans to fulfill their aspirations, and suggests a bleak picture for many minority families who have been caught in the web of concentrating neighborhood poverty during the 1980s and 1990s" (Flippen, 2004). The concentration of poverty in this country is not accidental nor is it unintentional. Certain populations have been historically segregated to certain areas. The evidence of inequality between white and minorities is irrefutable. This inequality is largely rooted in hatred and racism. Although some types of inequality are not planned, many other types are created and deliberate. Rawls' Theory of Justice essentially states

that everyone should have the same degree of liberty and that deliberate inequalities are unjust unless they work to the advantage of the least well off.

In this chapter, I have described how housing inequality constitutes an important component of urban inequality. Elements of housing such as available amenities, structural quality, and accessibility to goods and services define levels of housing inequality. Housing inequality, in turn is correlated with many other types of inequality, and together these different indicators of inequality shape access to opportunity. It is imperative to find solutions to housing inequalities and other types of inequalities in order to produce a society that is equitable and inclusive. By promoting a society that values social justice and equality, we could possibly enhance the quality of life and increase life chances for marginalized populations.

In the next chapter I will discuss how inequality has affected the city of Memphis specifically. As in many other southern cities, discrimination has played a profound role in housing inequality. The following chapter looks at the city's past and assesses the present issues related to inequality.

#### **Chapter 2: Memphis Inequality**

This chapter will discuss issues of social and economic inequality that impact the city of Memphis. The purpose of this section is to provide general background information about the city and identify current inequalities within this area. Building on the previous chapter which discussed the correlation between various types of inequality, this chapter explains the connection within the Memphis context. The first section of this chapter will provide an overview of the city's history. The next section will briefly discuss the relationship between Memphis City planning and socio-economic issues. The last section will describe some of the types of inequality that exist in Memphis today.

#### **Memphis History**

Thousands of years before President Andrew Jackson, General James Winchester and Judge John Overton discovered Memphis in 1819 it was occupied by the Chickasaw Indian tribe who lived along the bluffs of the Mississippi River. The city's location and accessibility to transportation systems established the city as a place with great potential. Memphis' rich soil contributed to the success of its economic base in the cotton industry which was also referred to as "King Cotton." However, it was the industry's absolute reliance on slave labor that made it exceptionally profitable and lead to the extraordinary growth of the slave market within the city. In 1862, once Memphis was declared Union territory after the Naval Battle of Memphis, many former slaves were drawn to the area. From 1860 to 1870 Memphis' African American population quadrupled (City of Memphis, 2003).

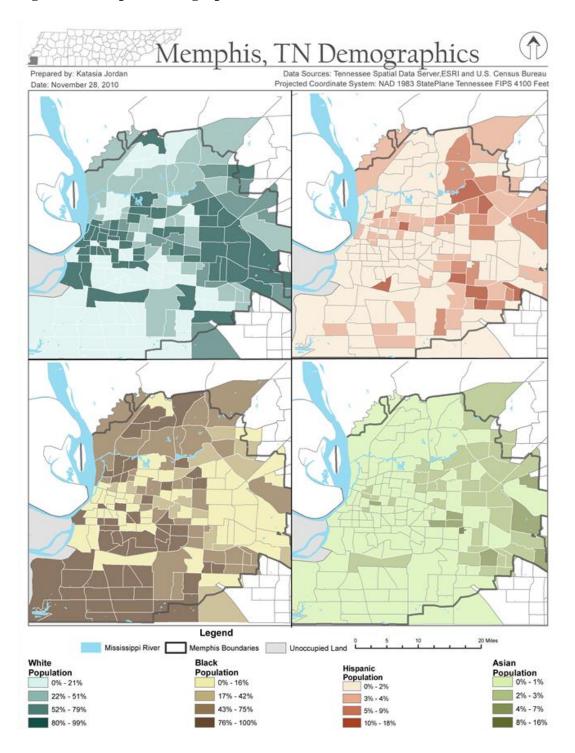
The city's early planning efforts focused on public buildings, railroads, zoning regulations and street development. Harland Bartholomew is credited with creating the 1924 Memphis Comprehensive plan. The Memphis plan became the prototype of his future planning efforts as he created plans for a total of 32 cities around the country. In 1935, Memphis became the second city in the country to establish a local housing authority. The first two housing developments to open were Dixie Homes which was the black residential development and Lauderdale Courts which was designated for white residents. As a reflection of the laws and beliefs of the time, there were obvious differences and disparities in terms of housing quality among these two developments.

During the first half of the 20th century Memphis prospered and was home to the world's largest spot cotton, hardwood lumber and even mule market. By the mid-20th century Memphis was one of the busiest cities in the south and known as the capital of the Mid-South (City of Memphis, 2003). In the 1950s the city of Memphis was recognized as the quietest, cleanest and safest city in the country on multiple occasions. The following decade Memphis took a divergent path as the African American population struggled for civil rights. The Sanitation Strike of 1968 gained national attention as the leader of the Civil rights Movement came to the city in order to advance the protest. Unfortunately due to the deeply rooted hatred and racism, Dr. Martin Luther King Jr. was assassinated as a result to his devotion to justice and equality. In 1981 the City of Memphis Planning Department created a new comprehensive plan entitled Memphis 2000 (City of Memphis). This plan gave more attention to housing and economic development concerns

in addition to those of physical development. The Memphis 2000 plan has since been revised through the development over several neighborhood plans, but here has not been a new comprehensive plan established in the last 30 years.

Historically, southern cities have been disproportionately affected by discrimination and inequality that has systemically and institutionally limited efforts of personal advancement for people of color. The political structure in southern cities is very different from those in other parts of the country. The south has historically been very resistant in terms of ensuring equity for all citizens. The following map illustrates the residential patterns of various ethnic groups throughout the city of Memphis (Figure 2). The most predominant spatial barriers exist between the black and white populations. The residential patterns among these two groups are nearly opposite. Areas with high concentrations of blacks tend to have lower rates of white residents and vice versa. Hispanics appear to be slightly more integrated geographically, displaying some overlap of areas with both black and white populations in the higher percentile. The Asian population appears to be scattered throughout the city with higher levels distributed in very small areas throughout the city, the majority of this groups is located within the eastern region of the city.

**Figure 2: Memphis Demographics** 



### **Current Inequality in Memphis**

### Housing

When compared to its surrounding cities within the Shelby County region, Memphis has the lowest median home values. In 2005, the median home values in Memphis was approximately \$20,000 less than the median home value in Arlington, \$81,000 less than the median home value in Collierville, and approximately \$95,000 less than the median home value in Germantown. Because Memphis has the lowest median home values, one would think housing would be more accessible and equitably distributed in terms of housing quality, but other information suggests the contrary. The median home value in the city of Memphis is slightly over \$110,000. Within the African-American community the median home value is approximately \$79,000 (US Department of Housing and Urban Development and US Census Bureau, 2005). Black and Hispanic homes have significantly fewer amenities such as garages, porches and separate dining rooms. Based on public opinion more African Americans believe they reside in the city's worst neighborhoods than any other cultural group (US Department of Housing and Urban Development and US Census Bureau, 2005). More blacks reported living within 300 feet of industrial plants or factories while Hispanics reported the most limited access to parks and open space and African Americans reported fewer quality daycares, trails within the community and community activities (US Department of Housing and Urban Development and US Census Bureau, 2005). There were also considerable disparities in other various indicators used to determine community quality. Vacant housing and dilapidated buildings flood the inner city areas of Memphis, causing blight and attracting

crime according to Memphis City Council Chairman Harold Collins. Housing built between the years of 1960 and 1969 have the highest rates of vacancy. The duration of vacancy for most homes is between two and six months (US Department of Housing and Urban Development and US Census Bureau, 2005).

The Memphis Consolidated Annual Performance Evaluation Report (CAPER) assesses the progress of the City of Memphis Division of Housing and Community Development (HCD) has made towards their goal to help alleviate housing inequality by providing assistance to low-income families for home restoration efforts, increasing housing opportunities for people living with HIV/AID, reducing homelessness and increasing home ownership. The report indicated the City of Memphis provided down payment assistance to 25 low-moderate income families through HCD and local nonprofit. The Single-Family Rehabilitation and the Volunteer and Minor Home Repair Programs combined to assist a total of 199 low-income households with home rehabilitation and repairs.

### **Residential Segregation**

Joe T. Darden wrote about African American Inequality within the urban structure of the United States over twenty years ago (Darden, 1989). He stated that inequalities between whites and African Americans are reinforced by residential segregation in metropolitan

areas and low African American suburbanization resulting from persistent racial discrimination in housing. During this period many jobs and other opportunities were moving out to the suburbs, but due to residential discrimination blacks were often left in the inner city communities which significantly limited access to high opportunity structures. Robin Flowerdew wrote that the clustering of ethnic groups was the result of three factors; the location of the cheapest housing in a few parts of the city, a tendency for members of the same group to prefer to live near each other and prejudice against the group by the residents of the rest of the city, who tried to exclude undesirable people from their own neighborhoods). Flowerdew stated "In contrast to other immigrant groups, blacks have remained distinct as an immediately identifiable group, and have remained highly segregated from the white population. They have remained a deprived group in terms of education, income and employment opportunities" (Flowerdew, 1979).

Over 30 years after he concluded his study of southern cities which included Memphis, the city is still struggling to overcome these disparities. In an effort to illuminate the lines that define opportunity, it is imperative to illustrate the connection between residential segregation, education, income and employment opportunities. Even today cities across the nation are extremely segregated along the most prominent boundary in geography, the color line. Unfortunately, people of color tend to live in systemically disadvantaged neighborhoods. In Memphis, these barriers are exceptionally vivid. Although Memphis is over sixty percent African-American the communities in which this population resides

are clustered throughout the city. Historically zoning regulations, unjust laws, redlining and hate crimes were used to confine the settlement of African- Americans and other undesirable groups. Today these methods have eveolved into more subtle and elusive practives such as gentrification, urban renewal, reverse redlining and white flight, as I discussed in the previous chapter. Athough the original purpose of gentrification and urban renewal may not have been to disproportionately displace low-income families and people of color, in current practice this is the most evident result.

## **Poverty**

An article published by the Memphis Commercial Appeal stated that children born and raised in Shelby County face some of the grimmest futures in the nation according to a study conducted by the Urban Child Institute (Roberts, 2009). The percentage of children living in poverty in the city rose despite the rise in the median family income. It is estimated that now, one in every four children in Memphis lives in poverty. According to The Urban Child Institute (UCI) over half of all census tracts have child poverty rates of 40 percent or higher in the city of Memphis (Urban Child Institute, 2010). African Americans are disproportionately affected by poverty nationally, and Shelby County also reflects this alarming disparity. The Memphis/Shelby County area has the highest total population of all counties within the state of Tennessee. Sixty- one percent of its total population below poverty. Memphis also has the greatest amount of poverty among

minorities. The figure below (Figure 3) depicts the distribution of poverty among minorities. The chart shows that when assessing the total population below poverty in Memphis, blacks account for 79 percent of that population.

Figure 3: Racial Distribution of Poverty in Memphis

Data Source: US Census Bureau 2006-2008 American Community survey 3 year estimates (individuals) (factfinder.census.gov)

Poverty among minorities in Tennessee varies depending on the city. Memphis however, has the highest rates of African Americans below poverty in the entire state. In Knoxville, 40 percent of African Americans are below poverty. In Chattanooga 29 percent of African Americans are below poverty. In Nashville, 27 percent of African Americans are below poverty. In Memphis 31 percent of African Americans are below poverty. There

are 109,175 more African Americans below poverty in Memphis than in Knoxville. The table below shows how African-Americans in poverty are distributed across the major cities within the state of Tennessee (Figure 4).

African-Americans Below Poverty in Major Tennessee Cities

\*\*Knoxville\*\*

\*\*Chattanooga\*\*

\*\*Nashville\*\*

\*\*Memphis\*\*

Figure 4: African American Poverty in Major TN Cities

Data Source: US Census Bureau, American Community Survey 2006-2008

According to an article published by the New York Times one of the major problems among African Americans which contribute to poverty is the scarcity of economic and entrepreneurial opportunities (Kilborn, 1999).

## **Unemployment/Income**

Income inequality has proven to be a profound problem in many cities. One study

showed that racial educational inequality and unemployment differences were the strongest predictors of racially based income inequality, which suggests that there is a correlation between racial income inequality and racial educational inequality (Adelman, Jaret, & Reid, 2003). Income dictates purchasing power and as previously mentioned, studies have found that purchasing power is a key indicator of housing quality; therefore those who lack purchasing power have a poorer quality of housing. Income therefore can be correlated to housing quality. Preliminary 2010 Data on Employment Status released by the US Department of labor shows unemployment rates for African Americans in Tennessee are significantly higher than the rates for Hispanics and Caucasians. The African American rate is 14.6 as compared to 8.3 for whites and 8.5 for Hispanics. In a comparison between the four major counties in the state of Tennessee, Shelby County has the highest unemployment rate. Over the last ten years the unemployment rate in Memphis has consistently been higher than the Memphis MSA and Shelby County Unemployment rates. The table below compares the unemployment rate for the Memphis MSA, Shelby County and city of Memphis over time (Table 4).

Table 4: Annual Area Unemployment Statistics 2000-2010

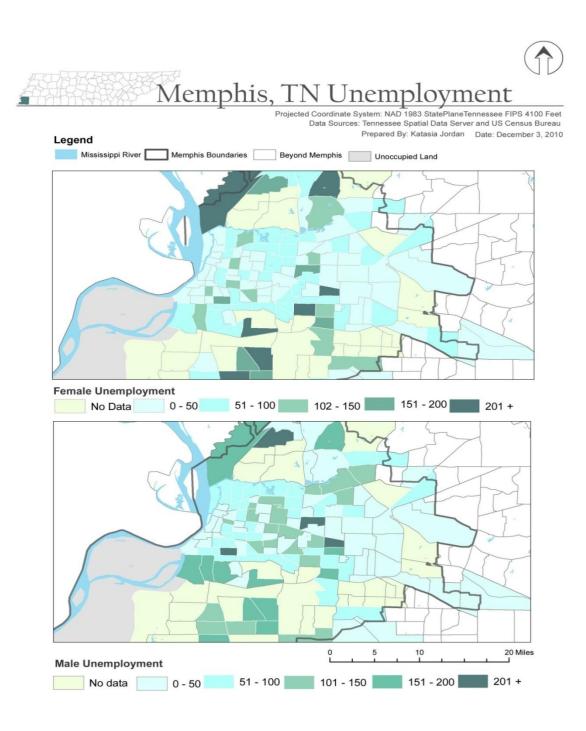
Year	Memphis MSA	<b>Shelby County</b>	Memphis
2000	3.8	3.9	4.9
2001	4.4	4.5	5.6
2002	5.3	5.4	6.7
2003	5.9	6.0	7.5
2004	5.9	6.1	7.6
2005	6.2	6.2	6.9
2006	5.7	5.7	6.4
2007	5.3	5.3	5.8
2008	6.9	7.0	7.7
2009	10.0	10.1	11.0
2010	10.0	10.0	10.9

Data Source: Memphis Area Chamber of Commerce

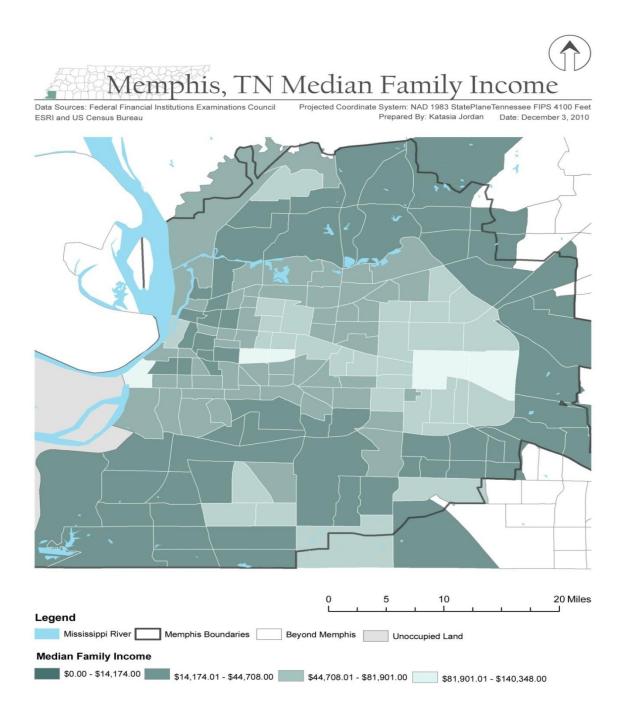
Income inequality has proven to be a profound problem in many cities. In Memphis,
Caucasians, Asians and Pacific Islanders have the highest median income while African
Americans, American Indians and Hispanics have the lowest median income. According
to the president of the Memphis Urban League, the incomes of African Americans were

about 62 percent of those of whites, compared to 60 percent ten years ago (Kilborn, 1999). The following map depicts the distribution of male and female unemployment in Memphis, as well as the distribution of median family income (Figures 5 and 6). The unemployment map reveals similarities spatially in unemployment for both males and females. These commonalities are mostly represented in the northeast section of the region and the eastern section of the city center. The median family income map indicates that areas with the lowest levels of median family incomes are located along the city limits. The areas with the highest median family incomes area centrally located.

**Figure 5: Memphis Unemployment** 



**Figure 6: Memphis Median Family Income** 



According to a recent analysis conducted by Market Street Consultants, the Memphis-Shelby County's current level of economic development investment is the most underfunded economic development program the firm has seen in its ten years of operation (Market Street Services, 2009). The table below shows the economic development resources for selected US metropolitan areas, many of these municipalities compete directly against the city of Memphis for new investment (Table 5). Based on the information provided it is clear that Memphis is currently not among the most competitive as it relates to economic investments. Memphis is significantly behind in terms of investments that could potentially lead to job creation and a more equitable distribution of income.

**Table 5: Economic Development Budget Comparisons** 

Memphis-Shelby	900,000	Think Memphis (Greater	\$324,000, N/A
Austin, TX	1,400,000	Opportunity Asian (Austin	\$2,600,000, \$14,200,000
Birmingham, AL	1,100,000	Metropolitan Development	\$2,400,000, \$12,000,000
Cincinnati, OH	2,000,000	Cincinnati USA (Initiative of	Partnership \$5,000,000
Cleveland, OH	4,000,000	Team NEO	\$2,700,000, \$13,500,000
Denver, CO	3,300,000	Metro Denver EDC	\$3,200,000, \$15,000,000
Kansas City, MO	2,300,000	KC Area Development Council	\$4,500,000, \$22,500,000
Nashville, TN	1,500,000	Partnership 2010 (Nashville	\$3,000,000, \$15,000,000
Richmond, VA	1,100,000	ImagineA Greater Richmond! (Greater Richmond Partnership)	\$2,500,000 \$14,000,000
Sioux Falls, SD	213,500	Forward Sioux Falls (Sioux Falls Chamber and Sioux Falls Development Foundation)	\$1,700,000, \$8,500,000

Data Source: Memphis fastforward.com

### Education

Studies have shown that the achievement gap between different racial and ethnic groups can be explained by the socioeconomic differences between the groups. There is a strong relationship between family income and academic achievement. Children from families with higher income performed better in school (Urban Child Institute, 2010). No Child Left Behind measures school districts based on whether the students meet performance benchmarks in math, reading and attendance for grades 3-8 and math, English and graduation rate for high schools. Schools that do not meet the achievement standards for two years are deemed high priority (Tennessee Department of Education, 2011).

Memphis has the highest number of high priority schools in the state of Tennessee. The table below indicates the number of schools labeled high priority under the standards set by No Child Left Behind in major cities in Tennessee (Table 6). When compared to other large cities/counties in the state, Memphis has nearly twice as many high priority schools as Nashville/ Davidson County, over four times as many schools as Hamilton County and approximately six times as many high priority schools as Knox County.

Table 6: Tennessee School Districts with the Most Schools Classified as High Priority under NCLB 2011-2012

School District Name	Number of High Priority Schools	
Davidson County (Nashville)	55	
<b>Hamilton County</b>	19	
Knox County (Knoxville)	16	
Memphis	94	

Data Source: Tennessee Department of Education

According to data published by Memphis City Schools only 20 percent of students receiving free and reduced lunch scored proficient or advanced in Reading/ Language Arts on the TCAP (Tennessee Comprehensive Assessment Program). This further illustrates the connection between academic achievement and SES. Public school performance in the city of Memphis has been less than stellar in fact, out of a total of 28 high schools in Memphis; half had a less than 65 percent graduation rate in two of the last three years. Furthermore, only 26 percent of student in grade 3-5 are proficient in reading and even less are proficient in grades 6-8 at only 24 percent based on TCAP scores. In 2010, 21 percent of blacks and 25 percent of Hispanics were proficient in reading compared to 61 percent of whites. The chart below shows the graduate rate for high schools within the Memphis City school system from 2007-2009 (Table 7.). Although there are a lot of questions when it comes to the effectiveness and accountability in terms

of public education, one thing is clear: the evidence shows that public education is failing for the majority of students in Memphis City Schools.

**Table 7: Memphis Public High School Graduation Rates** 

Schools	Graduation Rate 2007	Graduation Rate 2008	<b>Graduation Rate 2009</b>
BT Washington High	55	62.8	60.4
Carver High	65.7	63.9	53.2
Central High	85.1	88.3	83.8
Cordova high	88.2	73.8	77.3
Craigmont high	75.3	81.3	78.7
East High	69	72.7	62.4
Fairley High	69.3	51.4	64.1
Frazier High	42.3	54.8	56.3
Hamilton High	54.4	54.6	46.4
Hillcrest High	66.4	64.5	58.6
Kingsbury High	58.1	57.8	53.1
Kirby High	70.6	70.7	66
Manassas High	64.3	50.8	54.8
Melrose High	71.9	66.7	60.5
Mitchell High	68.9	78.4	67.7
Northside High	46.8	50.4	44.2
Oakhaven High	60.6	62.9	60.8
Overton High	85.3	80.6	75.3
Raleigh-Egypt High	80.4	69.5	59.7
Ridgeway High	91.3	82.5	80.2
Sheffield High	52.8	53.6	47.3
Treadwell High	46.7	46.9	53.3
Trezevant High	63.7	56.6	52.4
Westwood High	63.2	66.7	59.1
White Station High	86.8	86.3	85.9
Whitehaven High	85.6	84.2	80.9
Woodale High	71	62.4	64.2

Data Source: Tennessee Department of Education

Memphis was founded as a place of great potential and that potential still exists.

Unfortunately over time that potential has been distorted by a variety of social and economic problems. Disparities in housing which include home values, housing quality, and proximity to vacant or abandoned housing and accessibility critical services perpetuate social inequalities such as residential segregation poverty. The quality of public education in the city of Memphis is a profound problem in need of immediate attention. Educational attainment has been correlated repeatedly with housing conditions. It appears the best place to begin addressing issues of inequality is in the homes of our communities.

In the next chapter I will discuss the methods used to conducts multiple spatial analyses regarding the socio-economic inequalities addressed in this chapter. I will outline the framework and model used in this report as well as the indicators used to measure inequality.

### **Chapter 3: Methods**

In this chapter I will discuss the methodology used in this report to conduct a spatial assessment of inequality in the city of as well as the rationale for using those methods. I will specifically present the communities of opportunity framework which was designed by the Kirwin Institute for Race and Ethnicity at Ohio State University, and discuss in depth the spatial analysis technique used in this report, including the selection of and assessment of the factors used to indicate inequality.

## **Literature Review**

The UT Library website was utilized to research available literature and identify authors, articles and books that pertained to housing and housing inequality. I also searched for articles and other publications focused on issues related to housing discrimination such as residential segregation, subprime lending practices and white flight. I also reviewed reading material that was recommended or assigned by the CRP housing specialist Elizabeth Mueller for her affordable housing policy class. Finally I reviewed the Kirwin Institute website to identify resources that were used as reference material when assessing housing and opportunity.

# **Communities of Opportunity Framework**

This report is patterned after the Kirwin Institute's "Communities of Opportunity" framework, which ranks opportunity from very low to very high by using a combination of spatial and socio-economic criteria. High opportunity structures empower people to

succeed whereas low opportunity structures can impede an individual's ability to advance or progress. The "Communities of Opportunity" framework is a model of fair housing and community development based on the premises that everyone should have fair access to the critical opportunity structures needed to succeed in life; and that affirmatively connecting people to opportunity creates positive, transformative change in communities. The Communities of Opportunity model advocates for a fair investment in all of a region's people and neighborhoods to improve the life outcomes of all citizens, and to improve the health of entire regions (Kirwin Institute, 2011).

The Kirwin Institute model describes opportunity in terms of a combination of components and it is the interaction of these components that create opportunity structures. The components within these opportunity structures include housing, schools, jobs, grocery stores and retail just to name a few. Other factors such as low crime rates and access to open space also contribute to opportunity structures. These factors are combined using Geographic Information Systems into so-called "opportunity map," which thus becomes a research tool used to understand the spatial dynamics of "opportunity" within metropolitan areas. The purpose of opportunity mapping is to illustrate where opportunity rich communities exist. These communities are those which have access to fresh foods, open space, high performing schools and so forth. This model also assesses which populations have access to these communities.

## **Spatial Analysis**

This project uses the "Communities of Opportunity" framework and applies the "Opportunity Mapping" model in order to spatially analyze inequality. In this report inequality was given a range from very low to very high. Areas with high inequality impede an individual's ability to advance or progress. This report focuses on the components that create housing inequality and how housing inequality correlates with other components of inequality such as poverty, unemployment, income and educational attainment. The Kirwin Institute refers to inequality primarily in terms of racial and structural inequality. Housing characteristics are often used as indicators to reflect racial and/or structural inequality. Spatial analysis allows us to conceptualize socio-economic dynamics in a clear and concise manner. These tools allow us to see not only what communities have high rates of inequality, but also the relationship that these communities have to other important factors that influence inequality. Finally, analyzing and measuring inequality can serve as a critical tool in identifying potential solutions. In this report, spatial analysis techniques were employed using geographic information systems (GIS) in order to conduct an inequality assessment based on relationship between housing inequality and other types of inequality.

The following methodology was utilized:

- a. Select Indicators of Inequality
- b. Collect Data
- c. Basic Data Manipulation

- d. Map Indicators of Inequality
- e. Create Inequality Index
- f. Map Indicators of Housing Inequality
- g. Create Housing Inequality Index

## A.) Select Indicators of Inequality

The following indicators of inequality were selected because of their significant role in influencing inequality. These key indicators serve as a basis of many other issues that influence inequality and can be measured in order to identify target areas for intervention techniques. This report is patterned after the Kirwin model and therefore, the institute's methodology and rationale for the selection of indicators were also adopted here.

When selecting the indicators for housing inequality, I will only focus mostly on single-family housing units. Renter-occupied housing refers to all occupied units which are not owner occupied, this includes multi-family housing units group homes, etc. Owner-occupied housing refers to single family housing units that are occupied by homeowners. Vacant housing refers to single-family housing units that are not currently occupied. The housing inequality assessment will not evaluate multi-family housing units, group homes, transitional housing, or any other type of living quarters due to limitations of study. I also chose single family housing as opposed to other types of housing because of its significance in our society. Home ownership is highly regarded in our society, and for the purpose of this study it provides the best representation of housing inequality. In

addition, due to the wealth of information available on single family homes it is more feasible within the context of this analysis to use single family housing to conduct my housing assessment.

When selecting indicators for social and economic inequality, I did not limit or narrow the information exclusively to single family housing units. The selected indicators for other types of inequality such as poverty, income, unemployment and educational attainment encompassed all types of housing within the city of Memphis.

## <u>Indicators of Housing Inequality</u>

The following data matrix depicts the four housing factors that will be assessed and the effect that these factors have on housing equality and essentially housing inequality as well (Table 8).

**Table 8: Housing Inequality Data Matrix** 

<b>Housing Factors</b>	Description	Effect on Housing Equality
Housing Values	percentage of homes equal to or above median home value	negative
Vacant Housing	percentage of vacant housing	positive
Housing Tenure	The share of housing occupied by homeowners	negative
Renter -Occupied Housing	percentage of homes that are occupied by a renter	positive (see comments)

### Owner-Occupied Housing

Because this report is assessing housing inequality, owner-occupied housing is a fundamental and critical component to this report. It is essential that owner-occupied housing is included in this assessment in order to identify patterns, variations and differences among owner-occupied housing within Memphis. Owner occupied housing is negatively correlated with housing inequality because owner-occupied housing contributed to the funding of local schools and the development of personal wealth. Owner- occupied housing will be measured using the general percentage of owner-occupied housing within a census tract.

### Renter- Occupied Housing

Like owner-occupied housing, renter-occupied housing is also a fundamental component to assessing housing inequality within the city of Memphis. Because of the foreclosure crisis, renter-occupied housing has increased within the city and it is important to identify any correlation this may have to housing inequality as well as other types of inequality. Within the context of this report only single family renter occupied housing will be assessed due to data limitations. For research purposes pertaining to this report renter-occupied housing will be positively associated with housing inequality due to the general perceptions of renters and the social stigma that is attached to rental housing. The literature review in this report identifies the racial dimensions, resistance and stigmas attached to rental housing. This is not to suggest that rental occupied housing harms or hurts the community or even negatively affects the community, rather this correlation

simply expresses the negative perceptions associated with rental housing regardless of how ill-founded those perceptions may be. This is not to endorse those ideas, but only to illustrate that such perceptions exacerbate existing stratification and stereotypes thus having a negative correlation with housing inequality. Renter- occupied housing will be measured using the general percentage of renter-occupied housing within a census tract.

### Vacant Housing

In Memphis, vacant housing in particular is correlated to blight and crime. Vacant housing was selected as an indicator of inequality based on this relationship. Because vacant housing is correlated to crime, it is also indirectly related to neighborhood quality because of the impact crime has on the quality of a neighborhood. Vacant housing can also decrease property values. Vacant housing is positively correlated to housing inequality because of its tendency to increase crime and the ability to increase risk of also being exposed to higher levels of crime, adverse health conditions and economic decline associated with physical decay. Vacant housing will be measured by the number of vacant housing units within a census tract.

### Median Home Values

Median home value is selected as an indicator of inequality because of it is an important indicator of the ability of homeowners to build wealth through ownership. When assessing housing inequality it is imperative to identify how home values relate to inequality. High median home values are negatively correlated with housing inequality and low median home values are positively correlated with housing inequality. Census

data tells us that the median home value in Memphis was approximately \$110,000 in 2000, median home values will be measured based on the housing value by census tract for both the black and the white population to assess how each group deviates from the citywide average.

## <u>Indicators of Other Types of Inequality</u>

### Race

Communities with high concentrations of minorities were used to indicate inequality. Research shows disparities in housing quality, income distribution, employment and quality of education among whites and minorities. Although there are others factors that may also influence these disparities we cannot ignore the connection between race or ethnicity and inequality. Race was measured based on the percentage of ethnic/racial groups within a census tract.

### **Poverty**

Poverty is considered a key indicator of inequality because of its profound influence on critical factors that impact a person's life chances. Research shows that poverty is correlated with crime, unemployment and health issues among other things. Poverty is measured using the percentage of population below poverty within a census tract.

## Unemployment

An individual's ability to obtain gainful employment is the most significant factor when

determining a person's ability to be self-sufficient. When an individual's independence is compromised by unemployment it directly affects housing as well as a person's ability to obtain other basic needs. Therefore, unemployment is used as an indicator to determine inequality. Unemployment was measured by the number of people who were unemployed in an area by census tract.

#### Income Distribution

Research has shown disparities in income between whites and minorities as well as men and women. Because these disparities influence an individual's access to high opportunity structures such as quality housing and high performing schools, it is used as an indicator to determine inequality. Income distribution was measured using the median family income by census tract.

#### **Educational Attainment**

In this country there is no universal quality of education. Research shows that low income communities and communities of color tend to have a poorer quality of education when compared to white and affluent communities. Because such disparities exist in education, educational attainment is used as an indicator of inequality. Educational attainment was measured using three different levels of education; no education, high school education, and bachelor's degree by census tract.

### **B.**) Collect Data

The data collection process began by searching the internet for data sources and inquiring knowledge from GIS experts. Two types of data were used for this project; 1) spatial data

and 2) census data. The spatial data format was obtained in a shape file format and the census data format was obtained in an excel format. The spatial data was acquired from the following sources:

- 1. The Tennessee Spatial Data Server
- 2. ESRI
- 3. US Census TIGER Files

The census data was acquired from:

- 1. Federal Financial Institutions Examination Council
- 2. US Census Bureau American Fact Finder

County boundaries, line features water features and Memphis city limits were obtained from the Tennessee Spatial Data Server. Census tract 2000 data was obtained from ESRI and poverty, housing, education, employment, demographic and income data were obtained from census Summary File 1 and 3 as well as the Federal Financial Institutions Examinations Council.

## C.) Data Manipulation

After the data was collected the data was manipulated in order to emphasize the area of focus and display indicators, the primary steps of this process were;

- 1. Defining geographic coordinate system
- 2. Projecting the geographic coordinate system
- 3. Joining shape file data with table data

### 4. Clipping data within the boundaries of the city limits

All files were defined to GCS North American 1983 geographic coordinate system and then projected to NAD 1983 State Plane Tennessee FIPS 4100 Feet.

### D.) Map Indicators of Inequality

I created a spreadsheet in Excel and then imported the data for each indicator (poverty, unemployment, income distribution and educational attainment) by tract level into the spreadsheet. I then joined the spreadsheet to the Shelby County census tracts shape files. Once the table was joined to the shape file I exported the data so that the join would be saved. Then I used "symbology" functions to make aesthetic changes and mapped each indicator on a difference map using the exported shape file that contained the join.

## E.) Create Overall Inequality Index

This report contains two inequality indexes. One index is a combination of housing inequality variables and the other is a combination of the other social and economic inequalities discussed in this report (poverty, income, unemployment and educational attainment). The index explained in this section refers to the overall inequality index which combines a variety of social and economic factors. The purpose of this index was to create a map that reflected the spatial distribution of a combination of inequalities.

This map allowed me to analyze several factors of inequality on a single map. No weights were assigned to the indicators of inequality used to create this index, instead, a threshold of the top 25 percent was used to rate inequality individually by type (poverty, income, unemployment and educational attainment) for each census tract separately. Because I

have no basis for weighting the indicators of inequality, this method was used to illustrate the areas where the indicators of inequality were the highest. The threshold of 25 percent was used because this fraction can expressed in a straightforward manner without becoming convoluted or mathematically complicated. By using the top 25 percent, I was able to clearly identify the populations who experienced to highest rates of combined inequality.

Once the data for all indicators was mapped, I created another spreadsheet in Excel where I sorted poverty and unemployment in descending order. Median family income, population with high school diploma and population with Bachelor's degree were all sorted in ascending order. Once all the data was properly sorted I chose a threshold for all indicators within the top 25 percent by multiplying the total number of rows (216) by .25 which equal 54, therefore every value at or above line 54 was above the threshold. Once the threshold was established the areas (top 25 percent) for each variable were mapped by conducting a query within the attribute table where the values at or above (or below when applicable) the threshold were selected. A layer was then created from the selection and the data was exported. This procedure was followed for each variable. Once the variables were exported, the layer was added to the map and the symbology was manipulated. I then went back to the previous Excel sheet were the most vulnerable (top 25percent) variables were identified and I began to replace each variable that was at or above the threshold with a 1 and every variable that was below the threshold with a 0 (or vice versa depending on the variable and what indicator, with some indicators I used the lowest

values to identify vulnerability and with others I used the highest values like with high diplomas and poverty).

## F.) Map Housing Characteristics

I created a spreadsheet in Excel and then imported the data for each indicator (owner-occupied housing, renter-occupied housing, vacant housing and median home value) by tract level into the spreadsheet. I then joined the spreadsheet to the Shelby County census tracts shapefiles. Once the table was joined to the shapefile I exported the data so that the join would be saved and I went into symbology to make aesthetic changes and mapped each indicator on a difference map using the exported shapefile that contained the join.

## G.) Create Housing Inequality Index

The second inequality index created in this report is the housing inequality index. This index essentially is a combination of housing inequality variables (owner-occupied, renter-occupied, vacant, median home value). The index explain in this section refers to the overall inequality index which combines a variety of social and economic factors. The purpose of this index was to create a map that reflected the spatial distribution of a combination of inequalities. This map allowed me to analyze several factors of inequality on a single map. The housing inequality map was created using methods identical to the overall inequality map. Again, no weights were assigned to the indicators of inequality used to create this index, I had no basis for instituting such methods instead, a threshold of the top 25 percent was used to rate housing inequality individually by type (owner-occupied, renter-occupied, vacant, median home value) for each census tract separately.

The threshold of 25 percent was used because this fraction can expressed in a straightforward manner without becoming convoluted or mathematically complicated. By using the top twenty-five percent, I was able to clearly identify the populations who experienced to highest rates of housing inequality.

Once the data for all indicators was map I then created another spreadsheet in Excel where I sorted renter-occupied housing and vacant housing in descending order. Median home value and owner-occupied housing were sorted in ascending order. Once all the data was properly sorted I chose a threshold for all indicators within the top 25 percent by multiplying the total number of rows (216) by .25 which equal 54, therefore every value at or above line 54 was above the threshold. Once the threshold was established the most vulnerable areas (top 25 percent) for each variable were mapped by conducting a query within the attribute table where the values at or above (or below when applicable) the threshold were selected. A layer was then created from the selection and the data was exported, this procedure was followed for each variable. Once the variables were exported the layer was added to the map and the symbology was manipulated. I then went back to the previous excel sheet were the most vulnerable (top 25percent) variables were identified and I then began to replace each variable that was at or above the threshold with a 1 and every variable that was below the threshold with a 0 (or vice versa depending on the variable and what indicator- remember with some indicators I used the lowest values to identify vulnerability and with others I used the highest values like with high diplomas and poverty.

By manipulating the data I was able to convert several different methods of determining value (i.e. money to measure income and housing value, percentages to measure poverty rates, owner-occupied housing, renter-occupied housing and vacant housing and numerals to measure unemployment and educational attainment) all into a common means of interpretation. Manipulating data allowed me to simplify the data making it practical and easy to understand. Data manipulation allow me to translate different values into a more interpretable understand of the different levels of inequality- very low inequality, low inequality, moderate inequality, high inequality and very high inequality. Generalizing inequality in these terms does have its limitations. These terms can be both abstract and subjective. The level of geography (census tract) also has some limitations because it is the most detailed or defined level of geography so there may be concentrations of certain variables within small sections of the census tract.

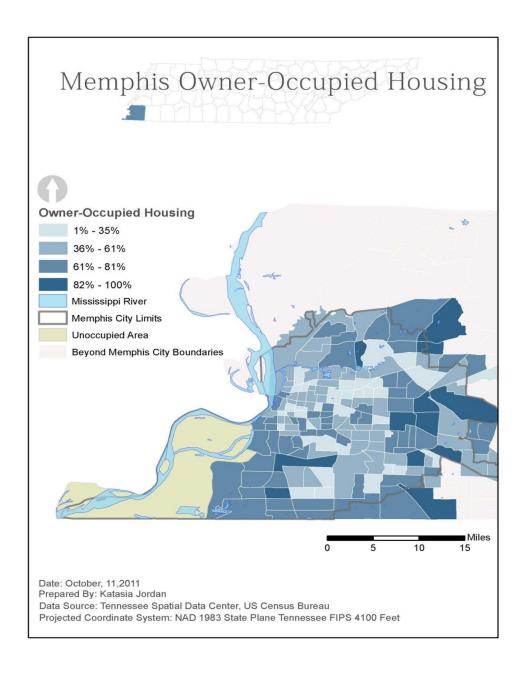
The following chapter will employ the methodology discussed in this section. The next chapter will illustrate and analyze the findings from the spatial analysis and provide a comparison between housing inequality and other types of inequality.

## **Chapter 4: Findings and Analysis**

The purpose of the spatial analysis is to identify how social and economic disparities are distributed geographically in order to identify possible patterns or trends for future studies. This section consists of three main components; maps that analyze the socioeconomics of inequality in Memphis, a discussion of the findings and an analysis and assessment of what the findings imply. The first component is the spatial analysis which results in the maps that are included in this section. Because this report focuses primarily on housing inequality, each indicator for housing inequality is analyzed individually. This analysis will indicate the extent of representation for owner-occupied housing, renteroccupied housing, vacant housing and median home value. As described in the previous section, composite representation of these indicators (the housing inequality index) will also be analyzed spatially. Next the housing inequality index will be compared to other types of inequality discussed in this report (poverty, income/unemployment and educational attainment). After each map, there will be a short section that reveals findings from the map. The final section of this chapter will analyze the possible social and economic implications based on the findings from the maps.

First I will assess the geographical distribution of owner-occupied housing. The following map (Figure 7) represents the varied levels of owner occupancy within the city. Some areas are exclusively occupied by home owners while others have levels as low as 1 percent. These maps will show the location of these areas.

Figure 7: Owner-Occupied Housing



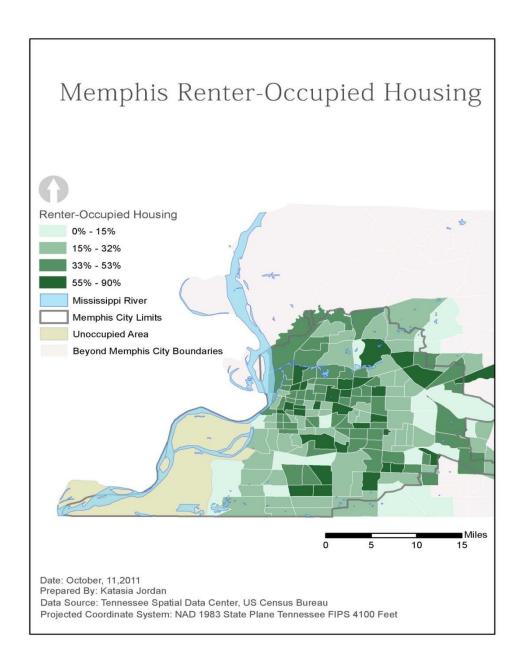
Findings: Owner-Occupied Housing

Upon performing a spatial assessment of the distribution of owner-occupied housing in Memphis, the analysis shows lower rates of owner-occupied housing in the central and northeastern area of the city with some distribution in the south and south east area of the city (Figure 7). In these areas owner-occupied housing ranged from 1 percent to 35 percent. Areas with an average amount of owner-occupied housing ranging from 35 to 61 percent were distributed along the northwestern border of the city and through the center of the city creating a path reaching the southeastern limits of the city. There were also some areas scattered along the eastern boundary of the city. Communities with higher levels of owner-occupied housing ranging from 61 to 81 percent were concentrated primarily in the southwestern area of the city adjacent to a large unoccupied area within the city limits. Unoccupied areas are areas that are undeveloped. The map reveals some areas located in the city center with high levels of owner-occupied housing, but these areas are limited. There is also a small concentration located in the northeastern region of the city with high levels of owner-occupied housing which falls within this range.

Finally the map reveals that the highest levels of owner-occupied housing are located in the eastern region of the city. This area has the highest levels of owner-occupied housing ranging from 82 to 100 percent. Very few tracts outside of this area have such a high rate of owner occupancy.

The next map will illustrate the distribution of renter-occupied housing in the Memphis area (Figure 8). Some areas in Memphis have renter-occupied housing levels as high as 90 percent. The following map will indicate these areas.

**Figure 8: Renter-Occupied Housing** 



### **Findings: Renter-Occupied Housing**

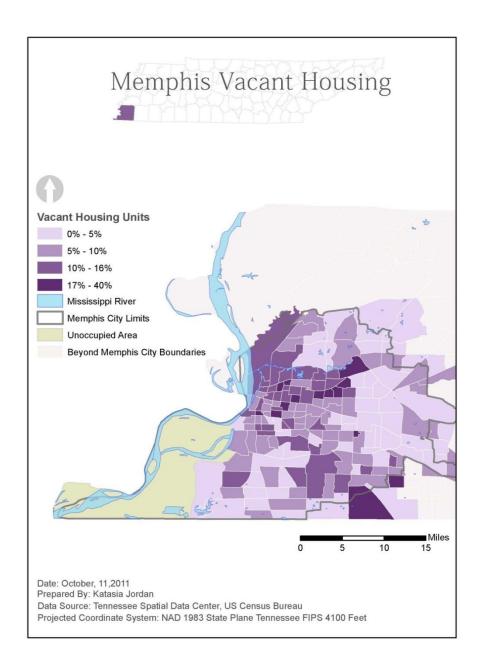
The analysis of the distribution of renter-occupied housing in Memphis shows that the highest levels of renter-occupied housing are scattered within the city center expanding south and northeast (Figure 8). These areas have levels of renter-occupied housing ranging from 55 to 90 percent. The northeast region of the city has the largest census tracks with very high levels of renter-occupied housing.

Areas with rates ranging from 33 to 53 percent are distributed from the northwest region of the city expanding across the city center to the southeast region of the city. There is a small concentration of renter-occupied housing at these levels located in the southern region of the city as well. Areas with moderate levels of renter-occupied housing ranging from 15 to 32 percent have the most dominant representation throughout the city. There are few concentrations of renter-occupied housing within the city center. The areas contiguous to the city center tend to fall within this moderate range.

Finally, regions of the city with the smallest amount of renter-occupied housing appear to be randomly distributed throughout the city. These census tracts have renter occupancy ranging from 0 to 15 percent. The largest area with renter-occupied housing falling within this range is located to in the east area of the city. The majority of these tracts are located in the southern region of the city with only one census tract in the northern region falling within this range.

Next, I will assess how vacant housing is distributed throughout the city (Figure 9). The highest vacancy rate in the city is 40percent. This map will identify where the areas with the highest rates of vacancy are located.

**Figure 9: Vacant Housing** 



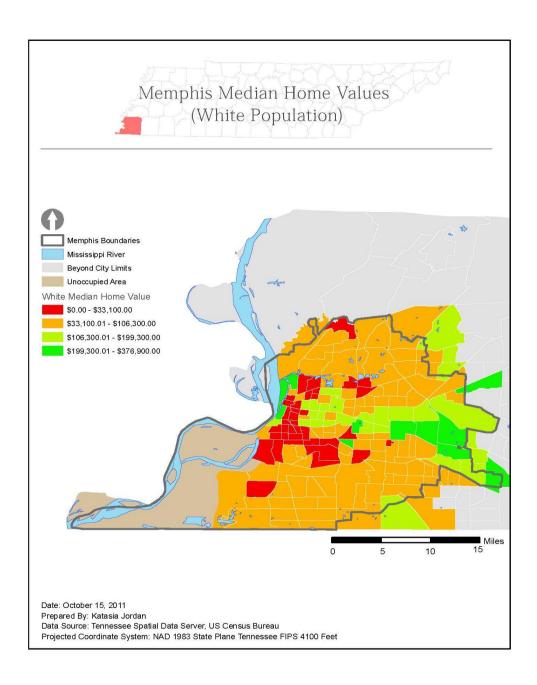
Findings: Vacant Housing

A spatial assessment of the distribution of vacant housing in the Memphis area indicates census tracts with the highest levels of vacant housing units are scattered within the northern section of the city center expanding northeast (Figure 9). These areas have level of renter-occupied housing ranging from 17 to 40 percent. There also appears to be a couple of small isolated communities within the southeastern region of the city that have significantly high levels of vacant housing. Other areas with substantial levels of vacant housing are scattered throughout the northern and southern areas of the city. There are only a few communities within the center of the city with vacancy rates ranging from 10 to 16 percent. Communities with moderate levels of vacant housing appear to be fairly evenly distributed through the center of the city expanding from the northern borders to the southern region of the city. The eastern region of the city has the fewest communities with vacancy rates ranging from 5 to 10 percent. Finally, the areas within the cities that have the lowest vacancy rates are located in clusters throughout the city. The largest clusters having significantly low rates of vacant housing are located in the eastern and southwestern areas of the city. There is also a cluster located in the northern region of the city and two very small areas located in the city center. These areas all have vacancy rates of 0 to 5 percent.

The next two sections will assess median home value within the city of Memphis (Figure 10 and Figure 11). Because of the established existence of residential segregation in the city, these maps will only evaluate the distribution of median home values for white and

black populations. The black and the white population in Memphis combined account for approximately 90 percent of the total population. The overall median home value in Memphis is approximately \$110,000. The purpose of this is to identify possible disparities in home value between these two populations. The purpose for selecting these groups specifically is to focus on the disparities that have historically been most important and have shaped current patterns. This is important because as discussed in previous sections of this report, home values influence school quality as well as an individual's ability to develop wealth.

**Figure 10: Median Home Value (White Population)** 



Findings: Median Home Values (White Population)

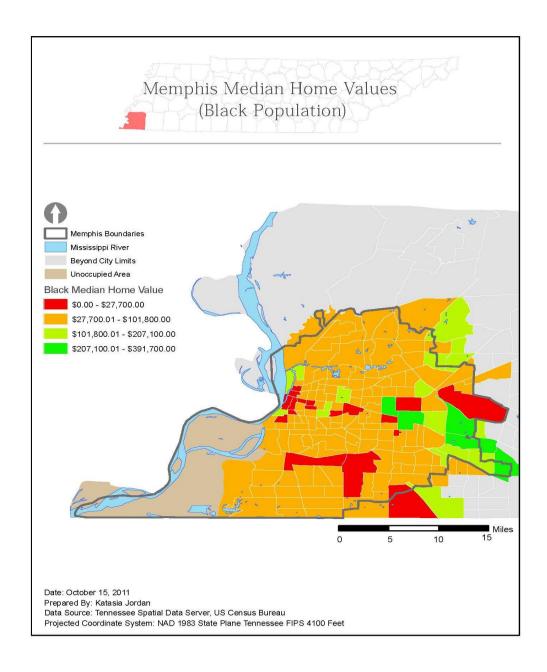
A spatial analysis of the distribution of median home values for the white population within the city of Memphis indicates areas with the lowest median home values for this population are located in the western portion of the center of the city center. There are also isolated tracts with significantly low median home values in the far north region of the city along the northern boundaries of the city and in the southwestern region (Figure 10).

Other areas with moderate median home values ranging from \$33,000 to approximately \$106,000 are located primarily across the north and south regions of the city. A few communities in the central region of the city also have home values within this range. The southern region of the city has the largest amount of median home values falling within this range.

There are very few communities within the city limits where the white population has median home values ranging from \$106,000 to approximately \$199,000. The communities with high median home values are located in the central section of the city with a few small areas located along the eastern boundary of the city.

Finally the communities with the highest median home values are largely located in the eastern region of the city with a very small area in the center of the city and along the western boundary of the city. These areas have median home values over \$199,000.

**Figure 11: Median Home Value (Black Population)** 



Findings: Median Home Value (Black Population)

A spatial analysis of the distribution of median home values for the black population within the city of Memphis indicates areas with the lowest median home values for this population are located primarily in the southern and eastern regions of the city, with a few small communities scattered throughout the central section of the city. These areas have median home values ranging from \$0 to approximately \$27,000 (Figure 11).

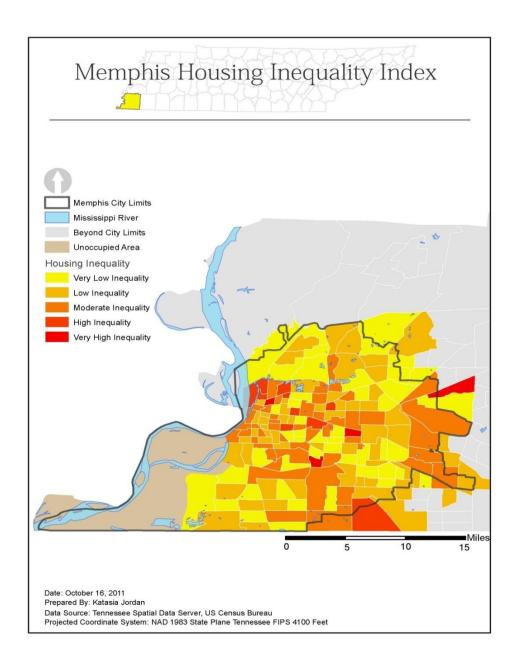
Other communities with moderate median home values ranging from approximately \$27,000 to \$100,000 are located in the north and south parts of the city omitting a very small section along the center of the city. The majority of the areas within the city consist of median home values within this range.

There are a few areas within the city where the median home value for the black population range from approximately \$101, 000 to \$207,000. These areas are located along the eastern border with a few small communities in the center and western region of the city.

Finally, areas with median home values over \$207,000 are concentrated exclusively in the eastern region of the city.

The next section provides an overall index by creating a composite representation of housing inequality (Figure 12). This index combines the areas with the lowest levels of own-occupied housing, the highest levels of renter-occupied housing, the highest levels of vacant housing and the lowest levels of median home value.

**Figure 12: Housing Inequality Index** 



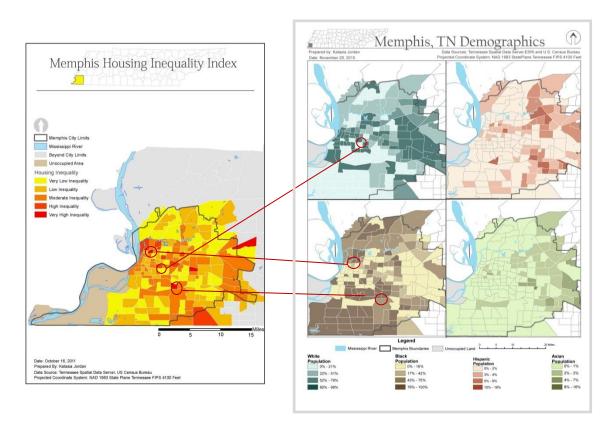
Findings: Housing Inequality Index

The spatial analysis indicates that the highest rates of housing inequality are scattered within the city center with very small clusters located in the north western region of the city (Figure 12). Areas with very high rates of housing inequality are limited and only appear in an isolated instance beyond the city center near the northeastern edge of the city. Areas with very high inequality are intermingled with other areas experiencing various levels of inequality, suggesting there is not one single island of very high housing inequality that is completely detached from areas with other levels of housing inequality. The southern region of the city appears to have the fewest communities with very high levels of housing inequality.

Another small area with high levels of inequality is located in southeastern section of the city extending beyond the city limits. Moderate levels of housing inequality are also located throughout the center of the city expanding south with a significant cluster located along the eastern border of the city. Low levels of inequality are distributed throughout the city extending across all areas with large clusters located in the north and eastern areas of the city. Finally, very low levels of inequality are also distributed across all areas of the city with fewer concentrations specifically in the east and west regions of the city. The largest concentrations of very low housing inequality are found in the southwestern and northern region of the city.

Next I will compare the housing inequality index to the Memphis demographic maps in order to identify what populations have the strongest spatial relationship with housing inequality (Figure 13).

Figure 13: Housing Inequality and Demographic Comparisons

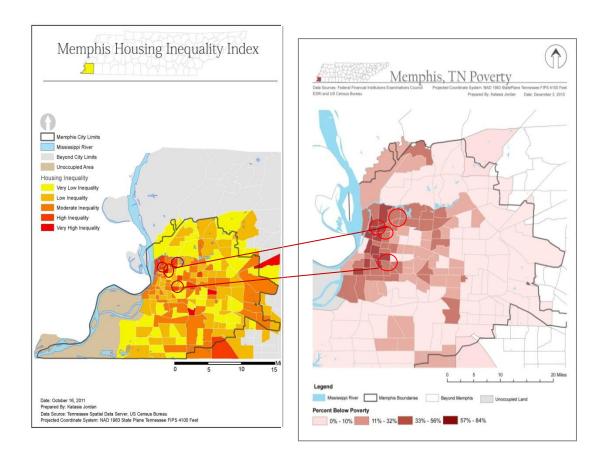


There were very few areas within the city that contained both the largest concentrations of any specific population and very high levels of housing inequality. The communities within the city that contain both high concentrations of a cultural group and very high levels of housing inequality were small and few in number. These maps suggest there

were more areas in which there were a large number of African Americans and very high levels of housing inequality, but not at a highly disproportionate rate (Figure 13).

According to this analysis there were no areas within the Memphis city limits that contained both a very high number of Hispanics or Asian and very high levels of housing inequality. Both the African American population and the white population had communities with high levels of housing inequality located within the city center, however these communities were distributed in different parts of the city center. Next I will compare the housing inequality index to the Memphis poverty in order to identify what areas of poverty have the strongest spatial relationship with housing inequality (Figure 14).

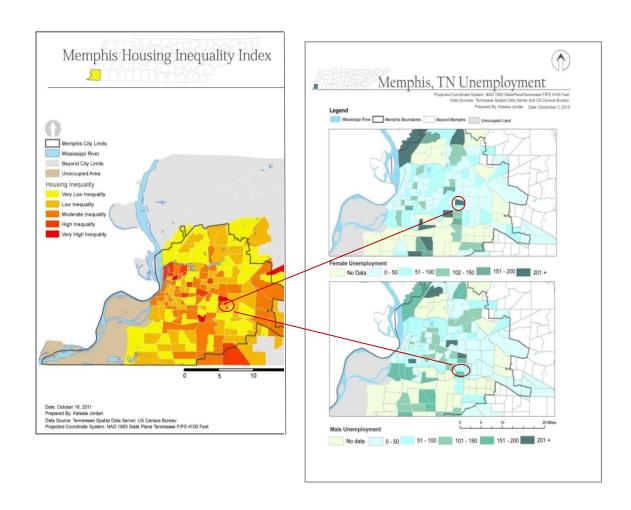
Figure 14: Housing Inequality and Poverty Comparisons



In terms of comparing housing inequality and poverty, this spatial analysis reveals that there are very few areas within Memphis that have excessive levels of housing inequality and extremely high rates of poverty. These areas are concentrated in the north eastern region of the city (Figure 14). Commonalities are noted between areas that have moderate to low housing inequality and areas with lower rates of poverty. Communities with very low rates of housing inequality also tend to have the lowest rates of poverty. The

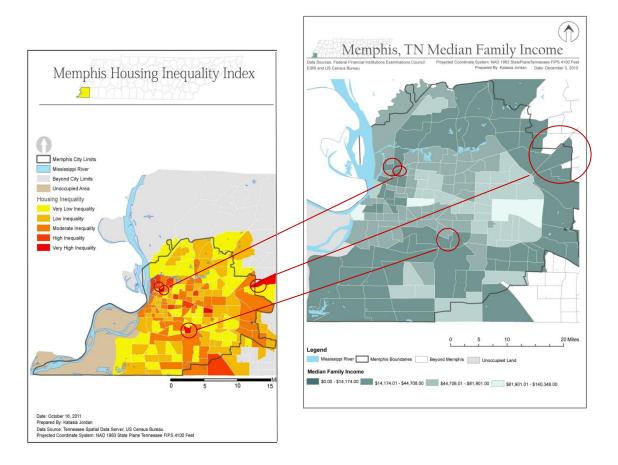
following map will assess the relationship between housing inequality and unemployment, and shows there is only a single census tract that has both the largest number of male and female unemployment as well as very high housing inequality (Figure 15).

Figure 15: Housing Inequality and Unemployment Comparison



Because there are a significant number of areas within the city that do not have employment data it is difficult to identify meaningful relationships between housing inequality and unemployment. However, in general, areas with low rates of unemployment generally appear to have moderate to very low levels of housing inequality as well. Next I will compare the housing inequality index to median family income in order to identify what areas have the strongest spatial relationship with housing inequality (Figure 16).

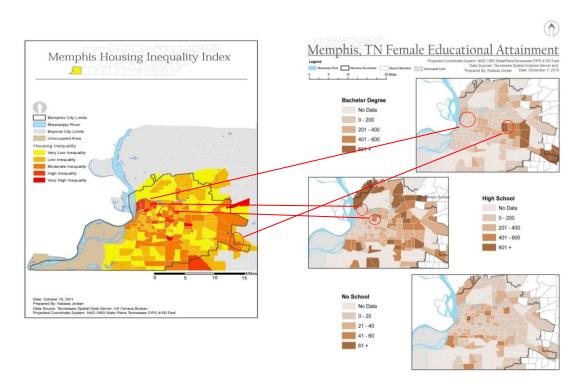




In terms of median family income in comparison with housing, there are a total of four census tracts within the city of Memphis which have both very high housing inequality and very low median family incomes (Figure 16). These areas seem to follow no apparent pattern and there is no evident spatial correlation between the four tracts with the exception of two being in very close proximity. The other two tracts are scattered in the northeastern section of the city and the south central area.

Housing inequality varies among the three census tracts with the highest median family income. The largest area with significantly high median family incomes located in the eastern section of the city has low housing inequality. Another area with median family income within the same range located in the south central area of the city has very high housing inequality. The final census tracts located in the northwest region of the city also have very high housing inequality. Next I will compare the housing inequality index to female educational attainment in Memphis in order to identify the spatial correlation between educational attainment among women and housing inequality (Figure 17).

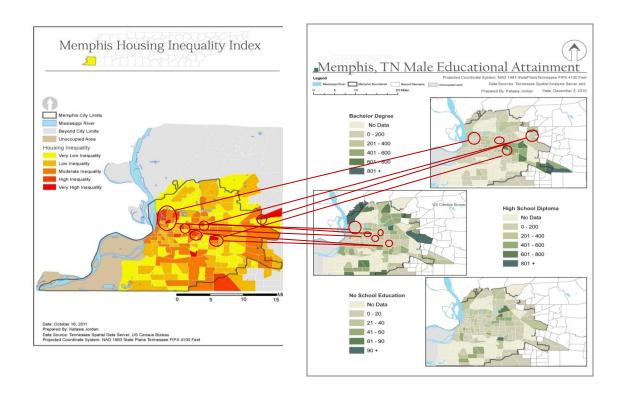
Figure 17: Housing Inequality and Female Educational Attainment Comparison



Because there are a significant number of areas within the city with insufficient data as it relates to educational attainment, it is difficult to identify meaningful relationships between housing inequality and educational attainment (Figure 17).

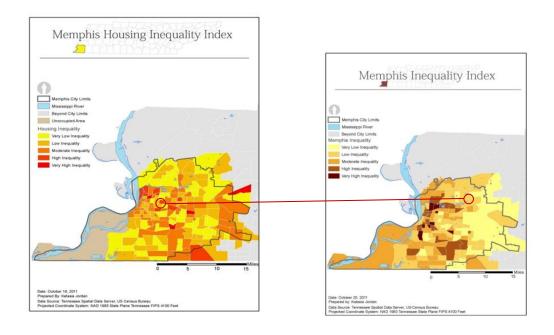
However, in reference to the female population obtaining a Bachelor's degree, there were a small number of areas that had both a very low number of females with a Bachelor's degree and very high levels of housing inequality. These areas were primarily concentrated in the northwestern region of the city. The areas with the highest number of woman holding a Bachelor's which were located in the eastern region of the city tended to have moderate levels of housing inequality. Areas where a low number of women had received a high school diploma that also had very high level of housing inequality were exclusively concentrated in the northwestern region of the city. There was no visible correlation between the female population within the city with no education and area with excessively high levels of housing inequality. As with female educational attainment the next map will compare the housing inequality index to male educational attainment in Memphis in order to identify the spatial correlation between educational attainment among men and housing inequality (Figure 18).

Figure 18: Housing Inequality and Male Educational Attainment Comparison



In terms of male educational attainment, there are also a significant number of areas within the city with insufficient data as it relates to educational attainment. However, although it is difficult to fully identify the relationship between housing inequality and male educational attainment however, there appears to be a correlation between these factors based on the maps presented here. Communities having very high housing inequality and very few males with Bachelor degrees are scattered throughout the northern hemisphere of the city expanding from the west, extending across the northern portion of the city center, and the eastern borders of the city limits (Figure 18). Areas where a significantly limited number of men received a high school diploma that also had very high level of housing inequality were concentrated in the city center and the northwestern region of the city. Through reviewing these maps, there was no apparent correlation between the male population within the city with no education and areas with excessively high levels of housing inequality. Next I will compare the housing inequality index to the social and economic inequality index in order to identify what areas have the strongest spatial relationship between both housing and other socio-economic inequalities

(Figure 19Figure 19: Housing Inequality Index and Inequality Index Comparison



# Summary analysis

Ultimately, when comparing housing inequality with other types of inequality based on the maps presented above, only one area has *both* a very high rate of housing inequality and a very high rate of overall inequality. This area is located in the northwest region of the city.

It also appears that the areas with the highest percentage of rental housing are also the areas that have the lowest percentage of whites. There is a correlation between vacant housing and the black population with consistent patterns indicating significantly high

volumes of both factors within the same areas. Communities with the most significant amount of vacant housing also have moderate levels of owner-occupied housing units.

Results of the spatial analysis reveal that Memphis, TN like many other cities is very segregated. The distribution patterns among the black and white population are nearly opposite. The heaviest concentration of Blacks appears to be in the southwest region of Memphis with considerable clusters in the Mid-town areas. The white population seems to be heavily concentrated in the eastern area of the city, but is also dispersed in high percentages in Mid- Town as well. Both Hispanic and Asian have the heaviest concentration of population on the East side of the city with a few dense populations on the outskirts of the city center. African Americans and the Asian population are also extremely segregated. The areas that tend to have the high percentages of Asian have typically low percentages of African Americans. The Hispanic and the African American populations seem somewhat integrated in the northeastern region of the city having over 43 percent African American and 5 to 18 percent Hispanic.

There are very few areas where black and white median family incomes are the same. Even in large areas such as those located in the north and south of the city where median family incomes were somewhat comparable, the median family income for whites was still a few thousand more than their black counterparts. Also, while poverty exists in areas that affect all ethnicities, it is most heavily concentrated in the central-western section of the region.

Surprisingly, however, the areas along the northern and eastern city boundaries that had the lowest median family income also had the lowest percentage of poverty. Based on the spatial analysis, the median family income for those areas with high concentrations of African Americans are less than \$15,000.

Male and female unemployment generally follow the same pattern in the city with different intensities. Unemployment appears to be heaviest for the female population in the central part of the region running north and south. The heaviest unemployment for males appears to take place in a specific tract in the north with also has high female unemployment rates and within the center of the city towards the east. When looking at the most vulnerable areas in term of areas that has unemployment in the top 25percent the center and the north is heaviest for males and the northwest appears to have high levels of female unemployment.

There were some areas that did not have any data on educational attainment. For the most part in terms of male educational attainment, the center of the city had the lowest attainment overall. The highest educational attainment for males appeared to be in the far eastern corner of the city. The highest levels of educational attainment for females were also located in the far eastern corner of the city. Very few females had no school education within the city and along the north and eastern boundaries high school educational attainment was also high.

At the same time, there is an obvious correlation between male educational attainment and housing inequality. Areas with very high rates of housing inequality also had very low rates of men who received a high school diploma. Areas with small numbers of males who had a Bachelor's degree also had high rates of housing inequality.

Overall, there is a cluster located in the northwestern region of the city that is repeatedly related to other types of inequality such as female educational attainment, income distribution and poverty. The African American population within this area range from 76 to 100 percent.

Based on the two indexes created (housing inequality and socio-economic inequality), the spatial analysis suggests that, there is not a strong spatial correlation between areas that have both very high rate housing inequality and socio-economic inequality.

Again, generalizing inequality in these terms does have its limitations. These terms can be both abstract and subjective. The level of geography (census tract) also has some limitations because it is the most detailed or defined level of geography so there may be concentrations of certain variables within small sections of the census tract.

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#### **Chapter 5: Discussion**

This section of the report synthesizes the findings above and discusses the implications of the data presented regarding the spatial distribution of housing inequality and its relationship to other types of inequality.

Results of the spatial analysis reveal that Memphis, like many other cities, is very segregated. The distribution patterns among the black and white population are nearly opposite. It appears that the areas with the highest percentage of rental housing are also the areas that have the lowest percentage of whites. There appears to be a correlation between vacant housing and the black population with consistent patterns that show the highest percentage of both factors within the same areas. Poverty exists in areas that affect all ethnicities, but it is most heavily concentrated in the central-western section of the region. Surprisingly, the areas along the northern and eastern city boundaries that had the lowest median family income also had the lowest percentage of poverty.

The highest levels of housing inequality appear to be concentrated in the central region of the city. This can easily be accounted for by the mixture of housing in the downtown region and its surrounding communities, however due to limitation of spatial analysis we cannot determine if this is the cause. It is possible that programs such as gentrification and urban renewal have influenced these disparities. As discussed earlier in this report, social components such as white flight may also contribute to housing inequality within downtown areas and central regions of the city. The findings of this report suggest that

housing inequality in Memphis does not disproportionately affect areas with higher concentrations of minority populations, thus the findings from the spatial analysis appear to contradict what numerous studies have shown.

Because housing inequality can be defined in many different ways it is hard to determine spatially which indicators reveal the most insightful information and findings. Housing inequality cannot be accurately defined by a single characteristic of housing such as home value, amenities available or even poverty among household. However, combining multiple factors into a single index can lead creating more questions than definite answers.

Housing inequality in Memphis has a stronger relationship to some factors more than others. The spatial analysis of this report suggests that, male educational attainment and poverty have the strongest relationship to inequality, while demographic distribution and unemployment have the weakest relationship to housing. While the relationship between poverty and housing inequality can be explained in a number of ways, the strength of the spatial correlation illustrated in this report between male education attainment and housing inequality warrants further studies. Referring to the communities of opportunity framework, it can be argued that the strong correlation between housing inequality and male educational attainment is evidence that residential segregation reduces access to quality schools although it is unclear why the correlation between female educational attainment and housing inequality did not have the same results. On the other hand, it is

possible that lower levels of educational attainment limit incomes, thus limiting purchasing power and housing choices to these areas. The effects could either be operating separately or both at once. Toby S. Jenkins wrote about the challenges of educating black men. In his report, he noted that the black male experience in America has made educating this population a perplexing task (Jenkins, 2006). Again, these findings warrant additional research.

# **Key Implications**

Housing inequality is not exclusively concentrated in minority areas

Prior to conducting this research it was my hypothesis that housing inequality in the city of Memphis was exclusively concentrated in areas with high minority populations. The spatial analysis performed suggests this is not the case in Memphis. In this analysis, areas with the highest rates of housing inequality as well as areas with the highest population of any given ethnic group were highlighted. This analysis revealed that areas that were affected by the highest rates of housing inequality were not concentrated in particular areas of any minority group at a disproportionate rate. There were only two areas within the city that had both the highest rates of black population and the highest levels of housing inequality as compared to one area that had both the highest levels of white population and the highest rates of housing inequality. These areas were comparable in size and generally located within the same region of the city.

There is a strong relationship between housing inequality and poverty

The spatial relationship between housing inequality and poverty was evident. There were several areas within the city that had both high rates of poverty and high levels of housing inequality. However, these areas are clustered in a specific region of the city, which could suggest disparities within those areas that should be attended to. It also identifies this area as a specific target for future intervention and legislative attention. Based on the information provided in the review of literature, we now understand the criticality of this connection. Housing inequality according to this index relates to a combination of factors. In order to find a solution we must understand the problem. We must understand the connection; housing is strongly related to poverty, poverty reduces educational attainment, reduced educational attainment limits income capacity and limited income capacity perpetuates the cycle which ultimately reduces quality of life and life chances. These areas also had relatively low levels of owner-occupied housing and relatively high levels of vacant housing.

Educational attainment is strongly linked to housing inequality

Education is a vital escape from a life of poverty, and this study suggests that educational attainment is strongly linked to housing inequality. As discussed earlier, home value is correlated with school funding, which is linked to school quality. Home values in many ways can also be correlated with housing quality. The disparities in home value and housing quality are examples of housing inequality that can be correlated to educational attainment. I would hypothesize, that areas with poor quality schools are more likely to

also have low educational attainment. If changes are not implemented to help resolve the issues of housing, it is very possible that Memphis City Schools will continue to suffer from poor performance, the high school graduation rate will continue to decline, dropout rates will continue to increase and the city's overall educational attainment will remain stagnant. The implications of an undereducated neighborhood can be detrimental to an entire city. The local economy is dependent on qualified laborers to meet the demands of the technological and service needs of its customers. In order to compete in a global economy we must promote a society that is both skilled and highly educated. By continuing to build social and economic barriers through allowing education that is both separate and unequal we significantly reduce our ability to meet our full potential as a country. By not promoting a quality schools in low-income and minority neighborhoods we reduce this populations" ability to have a better quality of life. We also fail to maximize on the potential to create skilled workers that will help fuel our economy. Ultimately, we risk the possibility of not having a population that has the tools to carry out the demands for the jobs of tomorrow. If we knowingly allow a specific group to be cut out of the future economy, then we are doing a grave injustice to ourselves as well as generations to come.

In the case of Memphis there is an alarming correlation between male educational attainment and housing inequality. The spatial analysis suggests that male education attainment is disproportionally affected by housing inequality more than any other type of inequality.

#### **Limitations of Study**

A significant limitation in this report was the data. Although census data is one of the best resources for national information about various populations, the census data used for the spatial analysis was from the year of 2000. Because the 2010 data was not yet available for Tennessee, the information may not have reflected the current circumstances within the city of Memphis. This analysis should be conducted again at some point with more current information.

As noted in the Pendall study, low-density zoning regulations are correlated to a reduction in the number of black and Hispanic residents. This is particularly relevant for this report not only due to the inequality that is linked to such practices, these findings also highlight other limitations within this report. By focusing on single family residential units, which falls under the zoning regulations of low density residential, it is possible that criterion reduced the representation of blacks and Hispanics thus impacting the results.

Although spatial analysis is a good tool to geographically identify the relationship between various factors and/or components, it does have its limitations. The ability to identify a relationship spatially does not reveal the cause of that relationship. The Kirwin model is useful for identifying the relationship between a geographical area and various socio-economic dynamics, but this model lacks critical qualitative input. The methodology for the 'opportunity mapping model is as follows: first indicators of

opportunity are identified and selected. Next sources of data are identified. Next a list of indicators is compiled and a data matrix is created. The z-scores are then calculated. Once the z-scores are calculated, the average of these scores is determined. A central requirement in selecting indicators of high and low opportunity is determining if there is a clear connection between the indicators and opportunity. Sources include federal organizations, state and local government organizations as well as non-profit and private agencies. The z-score is a statistical measure that quantifies the distance between data points and the mean. This allows data for geography to be measured based on their relative distance from the average for the entire region. In raw z score performance the mean value is always zero. Positive z-scores are always above the regions mean and negative z-scores are always below the region's mean. The final 'opportunity index' for each census tract is the average of z scores for all indicators by category. Census tracts are then ranked by sorting a region's census tract scores into ordered categories which are very low, low, moderate, high and very high. The z score average assume equal participation of all variables towards the calculations of the 'opportunity index.' There is no basis to providing unequal weights.

A problem with employing this model is that it only identifies associations between variables and does not go further. To fully understand how these factors work together and ultimately influence quality of life requires additional qualitative research. This research is critical to providing a greater understanding of history and context, which is essential information in order to find possible solutions.

Housing inequality is a complex and multifaceted problem. Given the limitations of the Kirwin model and the overall spatial analysis technique, future studies should expand the types of analysis used to include multiple qualitative as well as quantitative methods such as statistical analysis, surveys and focus groups. The spatial analysis model should also employ multiple scenarios depicting the varied results when weights are assigned differently to indicators or components. This will provide a more holistic understanding of how these indicators influence inequality and opportunity.

There should also be a greater concentration on the connection between city planning and the social issues that affect these cities. A critical limitation of the Kirwin Institute model is the inability to make a clear connection between various socio-economic dynamics and city planning- but this is imperative because it provides concrete information that can be used to justify specific policy changes on the local level. If we change the way we plan for the development of our cities we can change how this development negatively affects social aspects that interact with development. It is possible that the connection between housing inequality and limited access to opportunities could be due to zoning regulations that limit housing options for minorities. Assessing land use as it relates to housing inequality would be a critical next step in understanding the connection between planning and inequality. This could have a tremendous influence on the socio-economic issues that affect our cities. In the case of Memphis specifically, future studies should investigate the significance of the alarming correlation between male educational attainment and housing

inequality. There is no other social factor that has such a strong correlation to housing inequality. This is a critical and unexpected finding that warrants more research.

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