

FACTORS AFFECTING GENTRIFICATION IN AUSTIN, TEXAS, 1970-2000

THESIS

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ABSTRACT

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This thesis investigates gentrification in Austin by identifying the major factors that have affected how the city has gentrified. Utilizing the Neighborhood Change Database, this thesis employs principal components analysis to identify intercorrelated components that affected census tract change over time. Utilizing those results, this thesis constructs a Gentrification Stage Index at the census tract level to identify areas of Austin as they gentrify from 1970 to 2000. According to the results, Austin has been gentrified primarily by an affluent, white population that is not associated with high levels of homeownership. A stable black community emerged between 1970 and 2000, indicating that other forces have reshaped Austin's urban landscape.

Introduction

The Texas Triangle is an emerging mega-region that includes Dallas-Fort Worth, Houston, Austin, and San Antonio. The region is home to some of the fastest growing cities in the U.S. since 2000 (U.S. Census Bureau 2008; U.S. Census Bureau 2009). It is an attractive place to move to, or stay in, for different reasons. Austin is a “creative city” that attracts artists, gays, musicians, and high tech employees; the warm climate and abundant sunny days lure others (Frey 1996; Florida 2002). Projections estimate that Austin’s population will more than double over the next twenty years (Robinson 2008a). The racial and ethnic composition of Austin is changing rapidly. Hispanics now constitute nearly 36% of Austin’s population, while the Anglo share has fallen below 49% (Robinson 2008b).

Austin claims to have something for everyone. It is the “Live Music Capital of the World,” and it is home to the largest urban bat population in North America. The “Keep Austin Weird” campaign was created to encourage patronizing local businesses in an effort to maintain the city’s unique character. Austin is home to the state government, a flagship university, a lively art community, pleasant weather, and high-tech industries. All of these combine to attract a diverse population to the city.

Today, Austin’s urban landscape continues to evolve reflecting its more multicultural population. This evolution includes the gentrification of well-established neighborhoods throughout the city. Previous research on Austin’s gentrification

addressed the issue of crime (Holoubek 2000), historic preservation (Buitrago 2003), and the effects on small businesses (Pahwa 2001). This paper investigates gentrification in Austin by identifying the major factors that have affected how the city has gentrified and those variables are: percent white; percent black; percent Hispanic; average household income; poverty rate; unemployment rate; percent with a high school diploma and no college; percent with a bachelors degree or higher; percent with technical and professional employment; percent employed as executives, managers, and administrators; percent owner-occupied housing units; percent of population residing in a different house, but same county as five years ago; and median mortgage costs. Utilizing the Neighborhood Change Database (NCDB), this paper employs a time-series analysis at the census tract level to identify areas of Austin as they gentrify from 1970 to 2000. This paper proceeds with a detailed history of Austin's development and followed by an extensive review of the literature on gentrification. Next, there is an overview of the data and methodology employed in this paper, and finally a discussion of the results of this thesis.

Background

The Republic of Texas selected Austin in 1839 to serve as its new capital, and governmental officials and records were transferred from Houston soon thereafter. Judge Edwin Waller originally laid out a 14-block grid on the land that today is downtown. The piece of land was situated between Shoal Creek to the west, Waller Creek to the east, the Colorado River to the south, and the capitol square to the north (Humphrey 1997). The new seat of government attracted many people to the region in order to establish the capital.

Throughout the first 40 years Austin faced difficult circumstances and maintained a tenuous grip on power. Boosters from the City of Houston continued to assert that it should be the capitol of Texas. Austin was finally granted status as the permanent capitol in the 1876 Texas constitution (Humphrey 1997).

The 1880s were a period of intellectual growth. In 1881 the Texas legislature approved the creation of the University of Texas at Austin. Tillotson Collegiate and Normal Institute and St. Edward's University also opened during the 1880s. These educational institutions have been vital to the development of Austin for three key reasons. First, they have attracted an affluent group of faculty and administrators to the city. Second, the universities have formed a pillar to the local economy, drawing vast amounts of money to Austin. Third, the universities have produced an educated group of people, many who have chosen to remain in the city (Humphrey 1997).

Segregation in Texas cities continued during the Jim Crow era even though slavery had been outlawed in Texas in 1865. Whites lived within the original 14-block square, while blacks were confined in freedman towns such as Wheatville, Clarksville, and Masontown. This created a ring of minority communities surrounding the city center. Austin remained a segregated city until the 1960s brought substantial civil rights reform. The freedman towns have produced historic and unique housing stock.

Blacks began to concentrate on Austin's east side in the early 1900s, creating their own distinct neighborhoods with businesses, schools, and churches. In 1928 the city adopted its first master plan that promulgated establishing "negro districts." These areas quickly evolved into minority enclaves. East Austin was then supplied with its own services so that whites and blacks would not be forced to share (City of Austin 1929). Approximately 80% of East Austin's population was black by 1930, and the area came to be a safe haven for blacks and newcomers alike (Humphrey 1997).

Austin's black exodus began during the first half of the twentieth century. As blacks moved out, the Hispanic population quickly replaced them. By 1930, there was an established "Mexican District" near lower Shoal Creek and another budding Hispanic community near Zaragosa Park. The ethnic composition of Austin has led Humphrey (1997) to claim that Austin has followed a tri-ethnic pattern of segregation. For the remainder of the twentieth century Austin's black population continued to decline while the Hispanic population quickly replaced the blacks. Neighborhoods that had been home to a stable black population took on a decidedly Hispanic flavor. The overall Hispanic portion of Austin's population has increased consistently over the last five

decades (Robinson n.d.). Population estimates indicate that Austin's population is presently 36% Hispanic, while the U.S. average is under 15% (U.S. Census Bureau 2008).

Kinky Friedman—a well-known Austin transplant, author, musician, and one-time gubernatorial candidate— has more recently characterized Austin as a mélange of cultures, places, and people (2004). Central Austin “houses...students, politicians, professors, transients, and businessdroids” (Friedman 2004, 24). While East Austin “used to be a scary place where nice people didn’t venture; some parts of East Austin are still like that, but for ethnic diversity [East Austin] can’t be beat” (Friedman 2004, 24); West Austin is home to [college] students and some of the city’s most exclusive communities (Friedman 2004).

The city of Austin has influenced population and housing trends through legislation to control development. The Central Urban Redevelopment Combining District (CURE) of 1999 promoted neighborhood stability and the redevelopment of urban neighborhoods (City of Austin 1999a). Through watershed ordinances the city has protected the Edwards Aquifer (City of Austin 1986; City of Austin 1991; City of Austin 1992) limiting the type of development that can take place. The Smart Growth Initiative (1997) discouraged growth and land use intensification in the Edwards Aquifer recharge zone while promoting growth in East Austin. Two separate large-scale redevelopment plans aimed to promote mixed-use neighborhoods in East Austin (City of Austin 1999b; City of Austin 2004). The local government has sought to increase the density of housing in the urban core and away from the Edwards Aquifer recharge zone (Martin 2003).

The current hotbed for redevelopment resistance is East Austin, where change is visible in new development and rising property tax bills (Schwartz 2005).

Redevelopment in East Austin typically consists of large-scale projects that require the destruction of houses to produce a single development, typically condominiums. These large-scale projects are more noticeable, and therefore more likely to generate resistance. Many East Austinites are long tenured residents who are more sensitive to change (Aitken 1990).

Recently arrived artists and long-term residents have joined forces to maintain the flavor of their beloved East Austin. Opposition to what the locals perceive as gentrification has taken different forms. Political action groups such as the People Organized in Defense and her Resources (PODER), *El Concilio*, and *Con Ganas* have worked to preserve their neighborhood. Michael Schlieffe has expressed his dislike of gentrification by creating *Tales of the Really White Vigilante*, a comic book series chronicling a young man's attempts to save the East Austin he loves. A local theater company, *Teatro Vivo*, put on a production of *Fantasmaville in Spanglish* about the plight of Hispanics in a gentrifying urban neighborhood.

A search of Austin's local periodicals and archives reveals hundreds of articles concerning gentrification and renewal across the city. Austinites are conscious of the changes in their city and that there is conflict over how people in Austin believe they should develop, making Austin an ideal study setting because it appears that gentrification is currently (2009) reinventing the central city. Also, past gentrification research has focused on the deindustrializing areas of the U.S. (Beauregard 2003) while

less attention has been given to cities, like Austin, that were never major industrial centers.

Literature on Gentrification

The present study aims to identify areas in Austin as they have gentrified through time and as they currently are gentrifying. Gentrification studies have been overly focused on the historical dynamics of the process, and most research has identified outcomes of gentrification after the process had already begun, or even finished (Phillips 2004). Researchers have neglected places that are currently gentrifying or sitting on the cusp of renewal (Smith 2002a; Phillips 2004).

Since the 1960s, research on gentrification has been carried out in cities and rural areas throughout the world (Podagrosi and Vojnovic 2008). Ruth Glass (1964) first identified gentrification in her work on London. The process basically involves relatively wealthier individuals or families purchasing and upgrading older houses. The ideal building stock is often working class, historically significant, or aesthetically important. The incoming middle class fundamentally alters the social character of the neighborhood as the low- to-moderate income population is displaced.

Although gentrification has been studied for nearly 50 years, there remains a debate on its role in reshaping the urban environment (Lees 1994; Redfern 1997; Wylie and Hammel 1999; Slater 2006). Some have insisted that gentrification happens at a small scale and has no real impact on cities as a whole (Berry 1973; Berry 1980; Berry 1985; Yeates 1998). Others have insisted that gentrification signals the reversal of the decline of the North American inner cities, and that it significantly alters the urban

landscape by recentralizing services, recreational facilities, employment opportunities, and housing over the suburbs in order to serve the new population (Laska and Spain 1980; Wyly and Hammel 1998). Charter schools are a manifestation intended to serve the “gentrifiers of the 2000s” (Hankins 2007, 126).

Research has identified three primary forms of gentrification. The first pattern is what Ruth Glass (1964) originally identified as gentrification (also known as yuppification) that involves the in-migration of white, high-income and high-status residents and businesses (Van Criekingen and Decroly 2003; Moore 2009). The second model is known as marginal gentrification and it refers to gentrifiers who possess greater social and cultural capital than economic capital. Marginal gentrifiers tend to be white, students and young professionals who produce a more transient form of gentrification. Gentrifiers move in and stay only as long as the neighborhood is able to satisfy their needs. These people tend to leave the area when they settle into high-paying jobs and establish families, but more young professionals quickly replace them (Smith and Holt 2007; Moore 2009).

Finally, there is thirdwave gentrification, which differs in magnitude and structure from the earlier patterns (Moore 2009). Private developers and local governments collaborate to transform a neighborhood that was previously deemed too risky for investment through redevelopment and new construction (Hackworth 2002). These gentrifiers are highly educated whites and they are different because they are more likely to buy into a neighborhood that has already gentrified (Lees 2003; Moore 2009).

Gentrification, and the broader subject of neighborhood change, can be explained as a local response to metropolitan restructuring (Aitken 1990). Physically neighborhoods may face housing stock deterioration, densification, or land-use change. Socially, neighborhoods face the prospect of changing economic status, family status, ethnicity, and race (Shevsky and Bell 1955; Cybriwsky 1978; Aitken 1990). In behavioral terms neighborhoods are changed by differential “residential mobility” (Moore 1972; Birch 1979).

The new middle class leads the charge to the inner city (Smith 1996; Podagrosi and Vojnovic 2008). Gentrifiers have been labeled in different ways: the new class (Bruce-Briggs 1979); the new working class (Miller 1965); salaried middle class (Gould 1981); the middle strata (Aronowitz 1979); the working middle class (Zussman 1984); the professional middle class (Ehrenreich and Ehrenreich 1979); and pioneers (Smith 1996). These people have traditionally been childless, educated, predominantly middle- and upper-class, and white (Zukin 1987; Crowder and South 2005; Walks and Maaranen 2008).

Black gentrification surfaced in gentrification research during the 1990s. Black gentrification in the Brickton neighborhood of Philadelphia has emerged as a response to the racially discriminatory policy and lending practices (Moore 2009). Black gentrification is based on social justice. Blacks prevent widespread displacement while developing an area. Black gentrification has led to improved economic status, but not necessarily social status (Moore 2009).

Previous research identified the costs and benefits associated with gentrification (Atkinson 2004). The negative impacts are: the displacement of less affluent people, the loss of affordable housing, eviction, community conflict, and population loss. Positive impacts include: urban renewal, an increased social mix, poverty deconcentration, increased property values, increased tax base, and improved neighborhood services. Gentrifiers are not leading an urban renaissance because they often already live in the city (Atkinson 2004). The gentry fundamentally alter the social and political landscape of the receiving area because they differ from the local population (Hankins 2007).

Research has identified the importance of residential longevity, and the role of scale and distance in perceiving neighborhood change (Aitken 1990). Those who have lived in an area for more than four years are more sensitive to neighborhood change. The local population is less affected by change that occurs at a smaller scale and at a greater distance. But, as development moves closer or grows larger the locals experience greater perceived impact (Zube and Sell 1986; Aitken 1990).

Urban lifecycle theory is based upon research of neighborhood change in central cities (Hanlon and Vicino 2007). Downs (1981, 1982) posits that neighborhoods pass through consecutive stages of development, with each respective stage producing differing types of housing, density, and household composition. First, neighborhoods develop through investment, resulting in new construction and infrastructure. Next, neighborhoods decline as time passes. Disinvestment in an area speeds deterioration. The population grows older and the housing stock falls into disrepair. Residents with more resources leave the area in search of newer housing, which results in an inflow of

a population with fewer resources (Hoyt 1939; Park et al. 1967; Leven et al. 1976; Short 1978; Grigsby et al. 1987).

The rent gap theory has been identified as an underlying reason for the onset of gentrification in Europe, North America, and Australia (Clark 1987; Badcock 1989). This means that what people actually pay for rent (capitalized ground rent) is below what could be gained (potential ground rent) under a higher-value land use (Smith 1979; Clark 1995; Smith 1996). As an area experiences prolonged disinvestment in the built environment the capitalized ground rent declines and the potential return on investment increases with time. Finally, the cheap investment costs outweigh the potential social and economic risks of investment.

The Four Stage Model of Gentrification

Scientists have proposed a four stage model to explain the process of gentrification as it spreads across urban the urban landscape. Stage one is characterized by widespread disinvestment in an area and this marks the beginning of gentrification. Stage two indicates that capital and people have begun relocating to the area. Stage three is the most intense period of investment and population growth. Finally, in stage four the flow of people slows but money continues to pour in.

Stage One

Social scientists have outlined a four-stage model in an attempt to typify the process of gentrification (Gale 1984; Ley 1996). Stage one consists of widespread disinvestment, driving down housing costs in the city. Disinvestment is a rational economic choice on the part of landowners, governments, and financial institutions

(Smith 1987; Walks and Maaranen 2008). These individuals invest money elsewhere, allowing for growth in different areas. Disinvestment creates areas that are ripe for investment and profit-making at a later date (Smith 1996). Disinvestment stresses local service providers by removing the tax base and creating a concentrated pocket of poverty (Swanstrom et al. 2002; Joassart-Marcelli et al. 2005). Neighborhood decline has also been linked to increased economic segregation (Brinegar and Leonard 2008).

Stage Two

Stage two marks the beginning of reinvestment with the arrival of the gentrifying force, urban pioneers (Smith 1996). At first, the migrants are from a risk-averse group with greater locational choice. The incoming population might include students, gays and lesbians, childless couples, and marginal members of the professional class (Walks and Maaranen 2008). Urban pioneers have no need for local services, which speeds the decline of urban schools (Hankins 2007). The gentrifiers begin to upgrade their living space and surrounding property values increase as a result. Lastly, the new population attracts new forms of retail, such as coffee shops, bookstores, and pubs, to better suit the new residents. Original neighborhood residents are priced out of the neighborhood as housing costs continue to rise. Gentrification produces space to suit the more affluent population; in turn, the affluent incoming population consumes the new space (Hankins 2007).

Stage Three

Gentrification continues to gain momentum as the process progresses from one stage to the next. The third stage marks the peak rate of gentrification, leading to the

continued transformation of an area's social structure and housing stock (Walks and Maaranen 2008). There is little remaining risk of losing economic or social status and a more risk-averse population joins the process. Housing prices continue to rise, displacing the majority of less affluent people and converting rental property to owner-occupied housing. During this stage housing rehabilitation gives way to large-scale development, primarily condominiums. Also, during the third stage mainstream companies begin to replace of lower-order commercial establishments.

Stage Four

The fourth stage of gentrification has been called the super gentrification (Lees 2003) of an area. Urban pioneers have already cleared a path and almost all financial and social risk have been eliminated. The most risk-averse population feels it is now safe to migrate and they enter the neighborhood (Walks and Maaranen 2008). Little housing stock remains and prices increase, often forcing out the very people who initiated the gentrification process. The end result is an elite urban enclave, with a homogenous and wealthy population (Lyons 1996; Smith 1996; Hackworth 2002; Lees 2003).

Gentrification and the North American City

Researchers have posited that the cities across the United States and Canada have developed in a similar fashion due to a shared history and culture (Yeates and Garner 1976; Yeates 1997). Other researchers posit the North American City, however, does evolve within the cultural framework of the society in which it is located (Goldberg and Mercer 1986). Due to these differing cultural values, gentrification in many North

American cities has not manifested itself in the same manner (Mercer 1991). In fact, the contemporary city is marked by spatially proximate neighborhoods that are socially and economically disparate (MacLeod and Ward 2002).

There are two schools of thought regarding gentrification in North America. First, the revanchist city is an American construct that depicts a vengeful, dangerous urban landscape that is full of suffering (Smith 1996). Gentrifiers take back the city, pushing out the indigent in order to save the city (MacLeod and Ward 2002). Smith (1996) examines New York City during the 1990s and their efforts to clean the city for the bourgeois economy, relocating the poor inner city residents to the fringes of the city. Gentrifiers push pro-gentrification policy through local government because they share more in common with the local government than with the local population (Smith 1996). A similar pattern of gentrification has been identified in Baltimore (Harvey 2000). The proliferation of the revanchist city can also be clearly seen in the anti-homeless policies across the United States (Mitchell 1997).

The emancipatory construct is a Canadian viewpoint that is directly opposed to the revanchist theory (Slater 2002). The emancipatory city is an inclusive and livable place, full of hope. Gentrification in the setting of the emancipatory city brings residents and gentrifiers together in a rejection of suburban life (Caufield 1989). Canadian cities have displayed no significant tendency towards adversarial politics evident in the revanchist city (Ley 1996).

The schism between the revanchist city and the emancipatory city is rooted in the different research sites Caufield and Smith studied (Lees 2000). Manifestations of

gentrification differ between the United States and Canada because the urban context in which the process has occurred differs (Slater 2002).

Research has recently emphasized the role of neoliberal economics in reshaping the urban landscape (Lees 2000; Smith 2002b; Kern 2007). Local governments deregulate and employ a *lassiez faire* approach to attract the capital that will lead the renewal (Brenner and Theodore 2002; Smith 2002b). Renting is perceived as an inferior form of tenure and that home ownership is vital to North American culture (Choko and Harris 1990). No longer is home ownership an end itself; rather, people seek property that maximizes profit (Smith 1996). Landowners, financiers, developers, investors, and builders are the winners in the neoliberal restructuring, while the community and neighborhood is abandoned (Blomley 2004).

Data and Methods

Though urban renewal has manifested itself in different ways throughout Austin, this paper follows previous research by focusing solely on gentrification that upgrades existing housing stock (Bourne 1993; Wyly and Hammel 1998; Walks and Maaranen 2008). Newly built condominium developments are undoubtedly reshaping the area surrounding the central business district, but their role in Austin's gentrification is beyond the scope of this investigation. This thesis focuses on gentrification in the classic sense, that is, as it affects previously constructed housing stock.

This thesis utilizes the Neighborhood Change Database (NCDB from GeoLytics, Inc. 2003) to analyze census tracts in Austin. The NCDB has matched census tract boundaries across all censuses between 1970 and 2000, making these data ideal for analyzing census data through time. Tract level analysis is appropriate because the geographic areas have changed little since 1970 (Massey et al. 1994; South and Crowder 1997; Quillian 1999; Crowder and South 2005) and block-level data are unavailable before 1980. Census tracts will be used as a proxy to gauge neighborhood change in this study (Crowder and South 2005; Walks and Maaranen 2008).

This project employs a four-stage model of gentrification—disinvestment, early reinvestment, peak investment, and elite enclave (Ley 1996). Change in several variables through each decade will be examined to determine which stage of gentrification each tract is experiencing. These results will be compared to county level

data. Table 1 lists the variables that will be examined in this project and their hypothesized relationship with gentrification. These variables are a combination of socio-economic, demographic, and housing stability indicators that will determine if gentrification in Austin has manifested itself in a traditional manner (*i.e.* white, educated, and wealthy individuals) or if the city has followed a different model (*i.e.* black gentrification).

The two dependent variables have been selected to demonstrate the state of the housing stock in a census tract. Median gross rent will help determine what stage of gentrification a tract is experiencing. A value below the Travis County average indicates there might be a rent gap (Smith 1996), while a value that exceeds the county average demonstrates an area is desirable and healthy. The percent of occupied housing units demonstrates whether a neighborhood is rising or falling. The presence of vacant housing units indicates that people are not investing money in an area.

Table 2 is a list of the census tracts in Austin that this paper will examine. Areas of Austin that are in some stage of gentrification have been selected through correspondence with the demographer for the City of Austin, fieldwork, and analyzing narratives in local news outlets. These neighborhoods have been assigned a corresponding census tract by visually comparing a map of Austin neighborhoods and census tracts. The census tracts do not match the neighborhoods exactly, but cover approximately 50 percent of the desired neighborhoods. Some neighborhoods are considerably smaller than the census tract and others are much larger than any one census tract; therefore, this is not an examination of neighborhood change, but is an

investigation of census tract change. Figure 1 shows where the census tracts used in this analysis are located within Austin.

Table 1
Variables used to determine gentrification status

Conceptual category	Variable	Abbreviation	Hypothesized association with gentrification
Dependent	Median gross rent	Median Rent	
	Percent occupied housing units	% Occupied house	
Independent Demographic	Total Population	Tract pop	n/a
	Percent White (non-Hispanic)	% white	+
	Percent Black (non-Hispanic)	% black	-
	Percent Hispanic	% Hispanic	-
Socio-economic	Average household income	Avg. HH inc.	+
	Percent of population below poverty level	Poverty rate	-
	Percent of population unemployed	Unemployment rate	-
	Percent of population over 25 with a high school diploma	% HS diploma, no college	-
	Percent of population over 25 with a bachelors, graduate, or professional degree	% college degree	+
	Percent of people over 16 who are employed as professional and technical positions	% tech & professional employment	+
	Percent of people over 16 who are employed as executives, managers, and administrators	% exec., managers, and admin. employment	+
Housing	Total housing units	Tot housing	n/a
	Percent owner-occupied housing units	% owner occupied housing	+
	Percent of population over 5 residing in a different house, but same county as 5 years ago	% local movers	+
	Median monthly costs for owner-occupied housing units with a mortgage	Median mortgage costs	+

Source: GeoLytics (2003)

Measures of correlation demonstrate the interplay of the socio-economic, demographic, and housing variables. The results from the correlations analysis support or reject the hypothesized relationship between the variables and gentrification. Finally, a principal components analysis is employed to identify groups of intercorrelated independent variables that have combined to affect gentrification in Austin (Johnston 1978).

Table 2
Austin neighborhoods analyzed and the
accompanying census tract ID

Neighborhood	Census Tract ID
Bouldin Creek	13.05
Clarksville	12.00
East Cesar Chavez and Holly	10.00
French Place	3.03
Guadalupe and Blackshear	9.01
Hyde Park	3.01, 3.02
Swede Hill	8.03
Tarrytown	16.04
Travis Heights	14.01, 14.02
University Hills	21.13
Windsor Park	21.04, 21.05, 21.06, 21.12

Source. City of Austin (2001)

A visual inspection of the data separated by census period reveals which tracts are gentrifying and when they do so. Table 3 demonstrates how scores were assigned for the Gentrification Stage Index (GSI). Four separate scores were created based on the county average. Two classes categorize the variables that fall below the county average and two more identify the tracts that exceed county average. Tracts were identified as

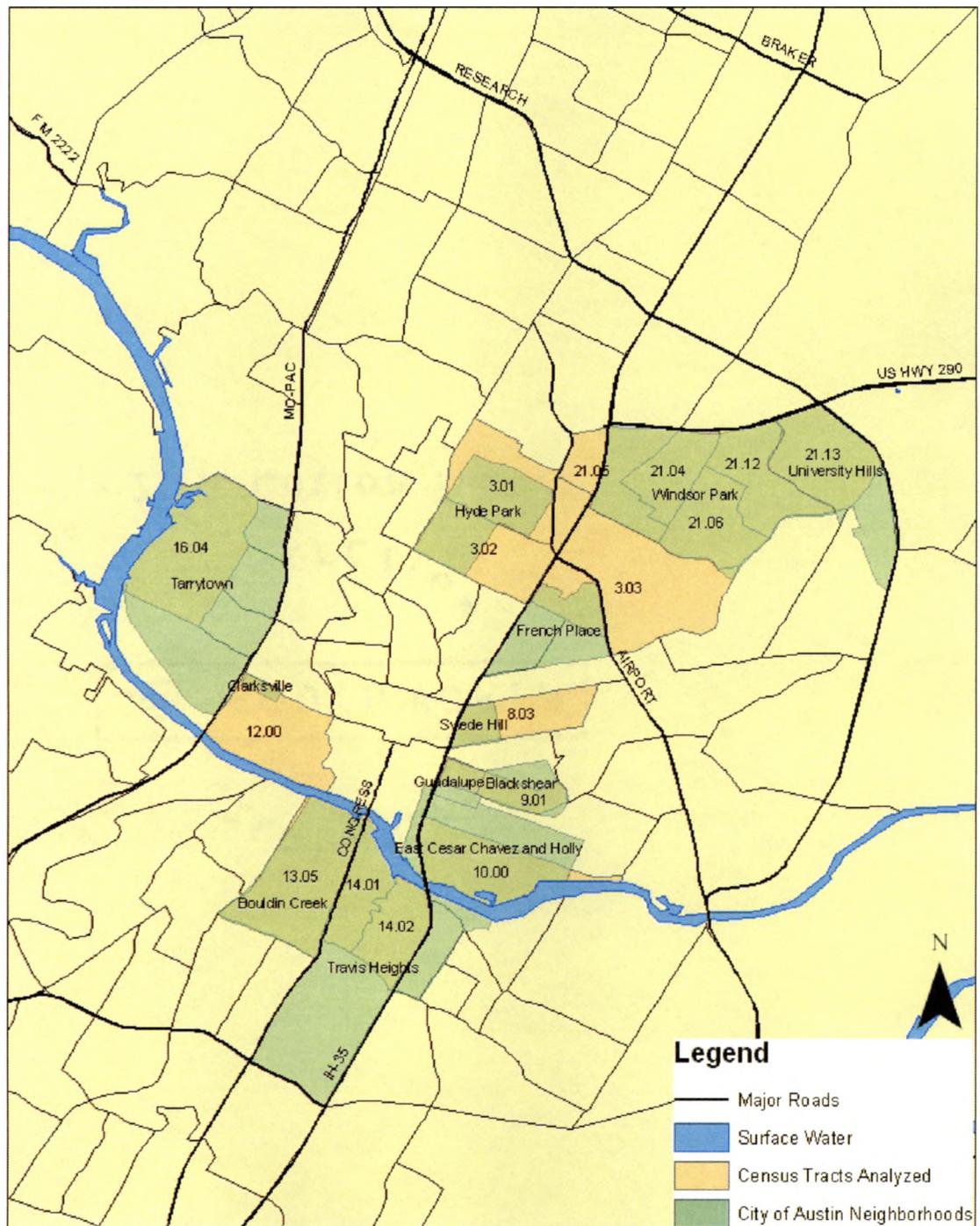


Figure 1
Austin census tracts analyzed
with neighborhood overlay

falling below 80% of the county average, between 80% and 100% of the county average, between 100% and 120% of the county average, or exceeding 120% of the county average. GSI scores were assigned to variables that demonstrated a positive association with gentrification in the following manner: less than 80% of county average, 1; between 80% and 100% of county average, 2; between 100% and 120% of county average, 3; and exceeding 120%, 4. Variables that demonstrated a negative association with gentrification were assigned scores in the following manner: less than 80% of county average, 4; between 80% and 100%, 3; between 100% and 120%, 2; and exceeding 120%, 1.

Table 3
Method used to assign Gentrification
Stage Index scores

		Association with Gentrification	
		Positive	Negative
Tract level variable compared to county average	>120%	4	1
	100-120%	3	2
	80-100%	2	3
	<80%	1	4

Assigning each variable a score of one through four created the GSI. It is worth noting that the GSI does not weight the variables that it examines. A score between 1 through 1.74 indicates disinvestment (stage one). A value between 1.75 through 2.49 represents the early investment stage (stage two). Any value between 2.50 through 3.24 denotes peak investment (stage three). Any score between 3.25 through 4 indicates that an elite enclave exists (stage four). The resultant score is an average of the twelve variables' score and it indicates whether a tract is declining or experiencing

investment. Figure 2 outlines the four stage model of the GSI.

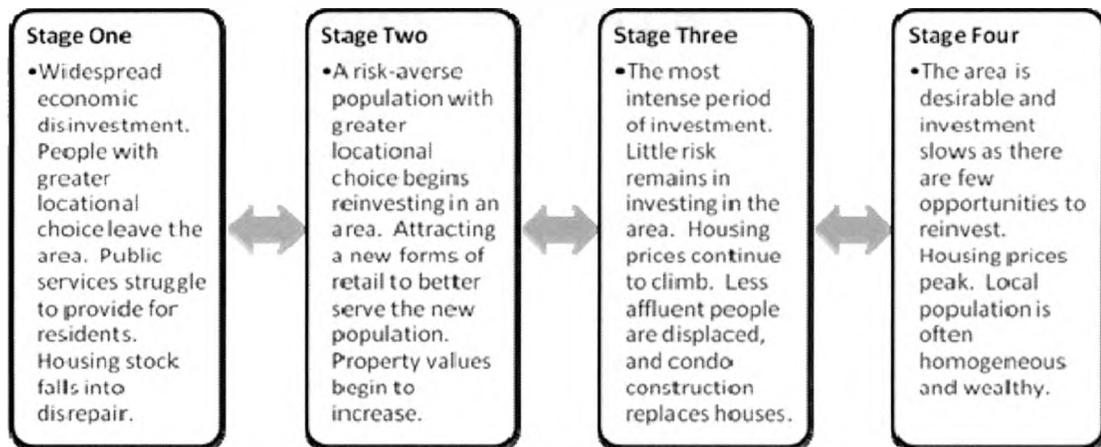


Figure 2
Four stage model of gentrification

Results

Correlations

Table 4 lists the results of correlation analysis between the variables measured from the 1970 census. The results of the correlation regarding race and ethnicity indicate that Austin was still segregated in 1970, but beyond that whites and blacks displayed no meaningful correlations. Only the percent of Hispanic in a tract was significantly correlated with the socio-economic variables used in this analysis. The Hispanic population was negatively correlated with education, professional occupations, and household income, while it demonstrated a positive relationship with unemployment and poverty rates. An examination of the socio-economic indicator variables reveals high levels of intercorrelation.

In 1980 the correlation between median rent and the socio-economic variables produced results that are consistent with hypothesized associations. Table 5 indicates that education, profession, household income, unemployment, and poverty rate, percent of whites, Hispanics, and the percent of owner occupied housing units are all significant. The group of socio-economic variables again returned high levels of intercorrelation. Lastly, measures of race and ethnicity produced expected correlations. Whites were highly associated with higher levels of education, professional employment, poverty, unemployment, and mortgage costs. Blacks and Hispanics also displayed similar correlation values in the opposite direction.

Table 4
Correlations analysis results for gentrified census tracts, 1970

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. % occupied housing	1													
2. Rent rate	0.162	1												
3. % white	-.518(*)	0.113	1											
4. % black	.516(*)	-0.118	-1.000(**)	1										
5. % Hispanic	-0.326	0.068	-0.077	0.079	1									
6. % local movers	0.157	0.073	-0.074	0.074	0.227	1								
7. % with HS diploma, no college	-0.081	-0.263	0.309	-0.308	-.745(**)	0.175	1							
8. % with college degree	0.205	-0.271	0.335	-0.334	-.729(**)	-0.365	0.447	1						
9. % tech & professional employment	0.181	-0.113	0.453	-0.454	-.815(**)	-0.323	.562(*)	.961(**)	1					
10. % exec., managers, and admin. employment	-0.095	-0.435	0.440	-0.438	-.661(**)	-0.268	.579(*)	.896(**)	.854(**)	1				
11. Unemployment rate	0.028	0.083	-0.168	0.170	.699(**)	0.109	-0.478	-.636(**)	-.656(**)	-.752(**)	1			
12. Poverty rate	0.082	0.370	-0.450	0.449	.776(**)	0.088	-.805(**)	-.829(**)	-.863(**)	-.924(**)	.735(**)	1		
13. Avg. HH income	-0.076	-.515(*)	0.356	-0.354	-.612(*)	-0.192	.564(*)	.897(**)	.826(**)	.972(**)	-.705(**)	-.918(**)	1	
14. % owner-occupied housing	-0.366	-.688(**)	0.178	-0.175	-0.278	-0.006	0.455	.528(*)	0.403	.784(**)	-.604(*)	-.712(**)	.842(**)	1

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 5
Correlations analysis results for gentrified census tracts, 1980

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. % occupied housing	1														
2. Median rent	0.355	1													
3. % white	0.155	.674(**)	1												
4. % black	-0.169	-0.401	-.764(**)	1											
5. % Hispanic	-0.050	-.600(*)	-.620(*)	-0.016	1										
6. % local movers	-.681(**)	-0.216	-0.068	-0.084	0.237	1									
7. % with HS diploma, no college	0.226	0.226	-0.047	0.184	-0.201	-0.061	1								
8. % with college degree	0.069	.644(**)	.868(**)	-.544(*)	-.690(**)	-0.152	-0.317	1							
9. % tech & professional employment	0.036	.621(*)	.854(**)	-.522(*)	-.703(**)	-0.068	-0.296	.978(**)	1						
10. % exec., managers, and admin. employment	0.241	.957(**)	.727(**)	-0.417	-.657(**)	-0.130	0.204	.748(**)	.725(**)	1					
11. Unemployment rate	-0.261	-.735(**)	-.852(**)	.608(*)	.601(*)	0.193	-0.348	-.676(**)	-.642(**)	-.808(**)	1				
12. Poverty rate	-0.309	-.880(**)	-.738(**)	.537(*)	.520(*)	0.177	-0.386	-.628(**)	-.586(*)	-.917(**)	.896(**)	1			
13. Avg. HH income	0.403	.886(**)	0.497	-0.328	-0.421	-0.291	0.061	.624(**)	.588(*)	.886(**)	-.564(*)	-.806(**)	1		
14. % owner-occupied housing	.561(*)	.616(*)	0.015	0.121	-0.185	-0.345	0.319	0.130	0.083	.573(*)	-0.246	-.553(*)	.788(**)	1	
15. Median	0.390	.850(**)	.688(**)	-0.438	-.558(*)	-0.232	-0.113	.819(**)	.828(**)	.875(**)	-.614(*)	-.739(**)	.879(**)	.541(*)	1

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

The trend of significant variables continued through 1990. Table 6 indicates that of the variables that were significantly correlated with median rent in 1980 only the unemployment rate was no longer significant. Median rent was closely correlated with race, ethnicity, education, occupation, poverty rates, household income, owner occupation, and median mortgage costs. Percent black and white were associated with the occupation and education variables. Socio-economic indicator variables were strongly intercorrelated again for the 1990 census.

Table 7 lists the results of a correlation analysis for 2000 and the results were consistent with 1980 and 1990. Whites were negatively associated with blacks and Hispanics, unemployment, and percent with a high school diploma. Whites were also positively associated with education, professional employment, rent, and mortgage costs. The socio-economic variables have proven themselves highly correlated with each other yet again. The housing cost variables (median rent and median mortgage) are highly correlated with the other socio-economic variables.

Two variables were inconsistently correlated with the remaining variables between 1970 and 2000. The percent of owner occupied housing, the percent of the population with a high school diploma, and the percent of the population that lives in a different house but the same county as 5 years ago are not consistently correlated. The measures of race and ethnicity were consistently correlated with each other. Whites were negatively correlated with blacks and Hispanics in each decennial census. The group of socio-economic variables demonstrated high levels of intercorrelation from 1970 to 2000.

Table 6
Correlations analysis results for gentrified census tracts, 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. % occupied housing	1														
2. Median rent	0.381	1													
3. % white	.550(*)	.524(*)	1												
4. % black	-.577(*)	-0.144	-.791(**)	1											
5. % Hispanic	-0.089	-.556(*)	-.520(*)	-0.065	1										
6. % local movers	-0.114	-0.225	0.030	0.023	-0.054	1									
7. % with HS diploma, no college	-0.343	-0.327	-0.439	0.359	0.309	.517(*)	1								
8. % with college degree	0.479	.580(*)	.881(**)	-.614(*)	-.639(**)	-0.165	-.763(**)	1							
9. % tech & professional employment	0.440	.549(*)	.909(**)	-.589(*)	-.720(**)	-0.086	-.629(**)	.958(**)	1						
10. % exec., managers, and admin. employment	0.482	.820(**)	.714(**)	-0.379	-.596(*)	-0.061	-0.304	.702(**)	.701(**)	1					
11. Unemployment rate	-.578(*)	-.520(*)	-.823(**)	.658(**)	0.444	-0.184	0.342	-.764(**)	-.769(**)	-.665(**)	1				
12. Poverty rate	-0.343	-.784(**)	-0.462	0.033	.572(*)	-0.053	0.339	-.553(*)	-.557(*)	-.769(**)	.505(*)	1			
13. Avg. HH income	0.425	.947(**)	.524(*)	-0.223	-0.453	-0.310	-0.460	.617(*)	.553(*)	.783(**)	-.511(*)	-.721(**)	1		
14. % owner-occupied housing	0.136	.642(**)	-0.111	0.389	-0.188	-0.139	0.080	-0.057	-0.034	0.438	-0.106	-.689(**)	.594(*)	1	
15. Median	0.483	.779(**)	.696(**)	-0.427	-.526(*)	-0.363	-.764(**)	.863(**)	.766(**)	.710(**)	-.529(*)	-.622(*)	.857(**)	0.187	1

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Table 7
Correlations analysis results for gentrified census tracts, 2000

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. % occupied housing	1														
2. Median rent	0.109	1													
3. % white	0.270	.549(*)	1												
4. % black	-0.385	-0.269	-.856(**)	1											
5. % Hispanic	0.058	-.580(*)	-.749(**)	0.383	1										
6. % local movers	0.007	-0.102	-0.245	0.209	0.083	1									
7. % with HS diploma, no college	-0.117	-.500(*)	-.925(**)	.828(**)	.731(**)	0.179	1								
8. % with college degree	0.064	.547(*)	.914(**)	-.700(**)	-.907(**)	-0.163	-.930(**)	1							
9. % tech & professional employment	0.103	.534(*)	.854(**)	-.663(**)	-.878(**)	-0.133	-.893(**)	.967(**)	1						
10. % exec., managers, and admin. employment	-0.031	.610(*)	.763(**)	-0.486	-.833(**)	-0.195	-.659(**)	.823(**)	.753(**)	1					
11. Unemployment rate	-0.246	-.609(*)	-.859(**)	.586(*)	.814(**)	-0.020	.714(**)	-.821(**)	-.776(**)	-.810(**)	1				
12. Poverty rate	0.191	-.639(**)	-0.450	0.140	.573(*)	0.223	0.409	-.536(*)	-0.464	-.741(**)	.590(*)	1			
13. Avg. HH income	0.015	.862(**)	.506(*)	-0.240	-.602(*)	-0.302	-.498(*)	.604(*)	.638(**)	.671(**)	-.544(*)	-.725(**)	1		
14. % owner-occupied housing	0.127	0.439	-0.112	0.302	-0.035	-0.323	0.192	-0.052	-0.013	0.184	-0.027	-.593(*)	.607(*)	1	
15. Median mortgage costs	0.081	.813(**)	.760(**)	-.524(*)	-.774(**)	-0.182	-.787(**)	.849(**)	.861(**)	.761(**)	-.703(**)	-.593(*)	.885(**)	0.238	1

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Principal Components Analysis

A principal components analysis was performed for each time period to simplify the number of variables. Table 8 contains the results of a principal components analysis (PCA) for 1970. Four components were extracted that accounted for 89% of variance within the variables. The first component represents the classic form of gentrification, where an affluent, educated, white population was the primary force driving change. The loadings for the unemployment rate, college-educated, and occupation are quite high. Within the first component there is a clear racial and ethnic preference for whites. The second component represents an emerging stable black community, but in 1970 does not indicate much else. The last two principal components are weaker and unclear.

Table 9 lists the results of the PCA for the 1980 census. The analysis extracted five components that account for over 95% of variance, of which the first two components are the most significant. The first component includes nearly all of the variables in the analysis. These factors in this component load highly with the percent of white people and negatively with blacks and Hispanics. Education, involvement in professional employment, unemployment rate, and the poverty rate all indicate a strong relationship. Lastly, median mortgage costs ranks highly in the first component.

Removing the variance explained by the first component reveals a stable black community. There is a negative association with the local moving population, indicating a change from the 1970 data. The black community displays a negative relationship with poverty rates, albeit a weak association in 1980. The second component has

Table 8
Principal components analysis results for gentrified census tracts, 1970

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.269	51.921	51.921	7.269	51.921	51.921
2	2.278	16.274	68.194	2.278	16.274	68.194
3	1.735	12.396	80.590	1.735	12.396	80.590
4	1.254	8.957	89.548	1.254	8.957	89.548

	Component			
	1	2	3	4
% Occupied Housing	-0.092	0.799	0.409	0.098
Rent rate	-0.374	-0.147	0.797	0.132
% white	0.470	-0.822	0.269	0.057
% black	-0.469	0.821	-0.274	-0.058
% Hispanic	-0.759	-0.428	-0.350	-0.120
% local movers	-0.223	0.010	-0.168	0.893
% with HS diploma, no college	0.705	0.034	0.000	0.538
% with college degree	0.898	0.185	0.189	-0.236
% tech & professional employment	0.903	0.099	0.367	-0.107
% exec., managers, and admin. employment	0.974	0.000	-0.088	-0.111
Unemployment rate	-0.768	-0.187	-0.044	-0.073
Poverty rate	-0.978	-0.012	0.016	-0.164
Avg. HH income	0.955	0.058	-0.195	-0.082
% owner-occupied housing	0.727	-0.031	-0.645	0.016

relatively strong negative associations with college education and technical employment. Average household income shows a weak positive connection with the black community; again it is a weak connection in 1980. Lastly, the second component loads highly with the percent of owner-occupied housing units and percent occupied

Table 9
Principal components analysis results for gentrified census tracts, 1980

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.230	54.864	54.864	8.230	54.864	54.864
2	2.512	16.744	71.607	2.512	16.744	71.607
3	1.402	9.345	80.952	1.402	9.345	80.952
4	1.176	7.839	88.792	1.176	7.839	88.792
5	1.058	7.053	95.845	1.058	7.053	95.845

	Component				
	1	2	3	4	5
% Occupied Housing	0.358	0.633	0.385	-0.431	-0.186
Median rent	0.920	0.196	-0.093	0.073	0.145
% white	0.848	-0.419	-0.080	-0.218	-0.171
% black	-0.546	0.443	-0.013	0.678	-0.191
% Hispanic	-0.680	0.080	0.158	-0.485	0.500
% local movers	-0.261	-0.513	-0.506	0.136	0.554
% with HS diploma, no college	0.102	0.588	-0.747	-0.099	-0.211
% with college degree	0.851	-0.428	0.215	0.137	-0.102
% tech & professional employment	0.826	-0.466	0.179	0.177	-0.091
% exec., managers, and admin. employment	0.957	0.080	-0.149	0.137	0.142
Unemployment rate	-0.855	0.060	0.334	0.253	0.207
Poverty rate	-0.910	-0.155	0.291	0.141	-0.093
Avg. HH income	0.858	0.295	0.159	0.126	0.331
% owner-occupied housing	0.494	0.750	0.103	0.176	0.329
Median mortgage costs	0.914	0.010	0.258	0.125	0.166

housing units in a census tract. All of these factors combine to paint the picture of an emerging stable black community. The last three components explained little variance.

A PCA of the data for 1990 extracts four components that explain over 89% of the variance of the variables. Table 10 contains the results of the PCA. The first

Table 10
Principal components analysis results for gentrified census tracts, 1990

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.057	53.716	53.716	8.057	53.716	53.716
2	2.548	16.987	70.703	2.548	16.987	70.703
3	1.622	10.811	81.514	1.622	10.811	81.514
4	1.188	7.919	89.433	1.188	7.919	89.433

	Component			
	1	2	3	4
% Occupied Housing	0.592	-0.209	0.005	0.588
Median rent	0.816	0.490	-0.008	0.098
% white	0.859	-0.406	0.200	0.002
% black	-0.533	0.720	-0.039	-0.371
% Hispanic	-0.643	-0.191	-0.215	0.631
% local movers	-0.177	-0.119	0.898	-0.090
% with HS diploma, no college	-0.629	0.218	0.607	0.199
% with college degree	0.924	-0.290	-0.078	-0.213
% tech & professional employment	0.898	-0.280	0.060	-0.269
% exec , managers, and admin. employment	0.870	0.217	0.201	0.086
Unemployment rate	-0.790	0.262	-0.371	-0.143
Poverty rate	-0.745	-0.500	-0.208	0.024
Avg. HH income	0.830	0.412	-0.154	0.161
% owner-occupied housing	0.277	0.885	0.073	0.270
Median mortgage costs	0.904	0.030	-0.314	-0.058

component consists of high earning, college-educated whites who are employed as professionals. There is a strong negative relationship with unemployment and poverty. Lastly, the first component loads highly with median mortgage costs. The second component again reflects a black community that has further stabilized. There is a

strong negative association with the poverty rate, and a very strong positive relationship with percent of owner-occupied housing units. There is also a positive association with average household income. The final two principal components were insignificant.

Finally, table 11 records the results of the PCA that was performed on data from the 2000 census. The analysis extracted four components that account for 89% of the variance in the data. The first component again represents high-income, college-educated white professionals. There is a strong negative association with the poverty rate and unemployment. Median mortgage costs also load highly in this component. The second component is indicative of a stable black community in Austin. There is a significant negative connection to the poverty rate, and a significant positive loading with the average household income. The percent of owner-occupied housing units again loads very highly with the black component. The last two components were of little importance.

PCA identified two separate components that have affected gentrification in Austin between 1970 and 2000: the typical white, affluent gentrification first examined by Ruth Glass (1964), and the emergence of a stable black community in Austin. This is not gentrification strictly speaking, as this cohort of people is not highly educated or affluent, but there is a very high level of home-ownership and a significant connection with average household income. The relationships between these variables strengthened between 1970 and 2000.

Employing PCA has also identified data patterns that are not present in the results. There is a complete absence of the Hispanic population. Hispanics in Austin

Table 11
Principal components analysis results for gentrified census tracts, 2000

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.658	57.721	57.721	8.658	57.721	57.721
2	2.400	15.997	73.718	2.400	15.997	73.718
3	1.293	8.620	82.337	1.293	8.620	82.337
4	1.045	6.964	89.302	1.045	6.964	89.302

	Component			
	1	2	3	4
% occupied housing	0.124	-0.251	0.830	0.424
Median rent	0.740	0.416	0.090	0.263
% white	0.913	-0.328	0.135	-0.072
% black	-0.663	0.572	-0.327	0.144
% Hispanic	-0.877	0.020	0.309	-0.042
% local movers	-0.222	-0.248	-0.421	0.816
% with HS diploma, no college	-0.879	0.363	0.001	0.134
% with college degree	0.953	-0.210	-0.118	-0.070
% tech & professional employment	0.924	-0.191	-0.079	-0.022
% exec., managers, and admin. employment	0.882	0.114	-0.168	-0.032
Unemployment rate	-0.872	0.129	0.035	-0.261
Poverty rate	-0.675	-0.567	0.156	0.033
Avg. HH income	0.774	0.546	0.095	0.033
% owner-occupied housing	0.155	0.887	0.339	0.064
Median mortgage costs	0.924	0.140	0.012	0.054

currently comprise more than one-third of the population while blacks only make-up approximately 10%. These analyses may have missed something because it is difficult to believe that such a large segment of the population would have no impact on gentrification in the city. Also, despite the status of stable black communities in Austin, the housing costs in the stable black community remain quite low. Lastly, the racial discrepancy in percent of owner-occupied housing is interesting. For the white

population, there is essentially no association with home-ownership. This indicates that white gentrification in Austin has more to do with the presence of whites instead of white home-ownership. The black community, on the other hand, displayed a strong connection with the percent of owner occupied housing.

Gentrification Stage Index

The results of the correlation analysis generally support the hypothesized relationships with gentrification. These variables were combined to create the GSI. Table 12 contains the results of the GSI. The results indicate that only three (Clarksville, Guadalupe and Blackshear, and Swede Hill) were in a stage of disinvestment in 1970. Windsor Park and University Hills were at the end of a period of intense suburbanization and maintained high levels of investment. Tarrytown is already considered an enclave in 1970 according to the GSI. Hyde Park and French Place were in the early investment stage. Holly, East Cesar Chavez, Travis Heights, and Bouldin Creek were in the early investment stage.

Hyde Park and French Place remained in the early investment stage in 1980, but received a higher score as a result of improving conditions. East Austin neighborhoods faced continued disinvestment. Clarksville progressed into the early investment stage, indicating that reinvestment had begun in the neighborhood. Bouldin Creek fell into a state of disinvestment. Travis Heights advanced into the peak investment stage. Tarrytown was still an elite enclave. By 1980, Windsor Park and University Heights were declining. Though their scores indicate that these areas were still experiencing investment, it was to a lesser degree than in 1970. Figure 3 maps each neighborhood's

gentrification status in 1970. Figure 4 displays each the GSI score for the selected tracts in 1980. Figure 5 maps the results of the GSI for each neighborhood in 1990. Figure 6 contains the resultant scores of the GSI for each tract for the 2000 census.

Table 12
Gentrification stage index, 1970-2000

Neighborhood	Census	1970	1980	1990	2000
	Tract				
Hyde Park	3.01	2.00	2.00	2.08	2.54
Hyde Park	3.02	2.00	2.46	2.69	2.77
French Place	3.03	2.00	2.15	2.62	1.85
Swede Hill	8.03	1.50	1.46	1.54	1.31
Guadalupe and Blackshear	9.01	1.50	1.46	1.31	1.31
East Cesar Chavez and Holly	10.00	1.75	1.62	1.54	1.38
Clarksville	12.00	1.58	2.31	2.69	3.23
Bouldin Creek	13.05	1.83	1.46	1.62	1.77
Travis Heights	14.01	2.33	2.54	2.92	3.46
Travis Heights	14.02	2.42	2.54	2.92	3.38
Tarrytown	16.04	3.33	3.54	3.77	3.85
Windsor Park	21.04	3.33	2.62	1.92	2.00
Windsor Park	21.05	3.42	1.62	1.31	1.31
Windsor Park	21.06	3.33	2.46	2.31	1.77
Windsor Park	21.12	3.42	2.92	1.92	1.38
University Hills	21.13	3.33	2.92	2.77	2.08

Hyde Park and French Place showed continued improvement. French Place had entered the peak investment stage, indicating gentrification was intense. One of Hyde Park's two tracts was also in the peak investment stage, while the other was experiencing early investment. Swede Hill; Guadalupe and Blackshear; and Holly and East Cesar Chavez were still displaying signs of disinvestment. Clarksville developed even more, as neighborhood investment continued to reshape the area. Bouldin Creek showed marginal improvement and was still in a stage of disinvestment. Travis Heights'

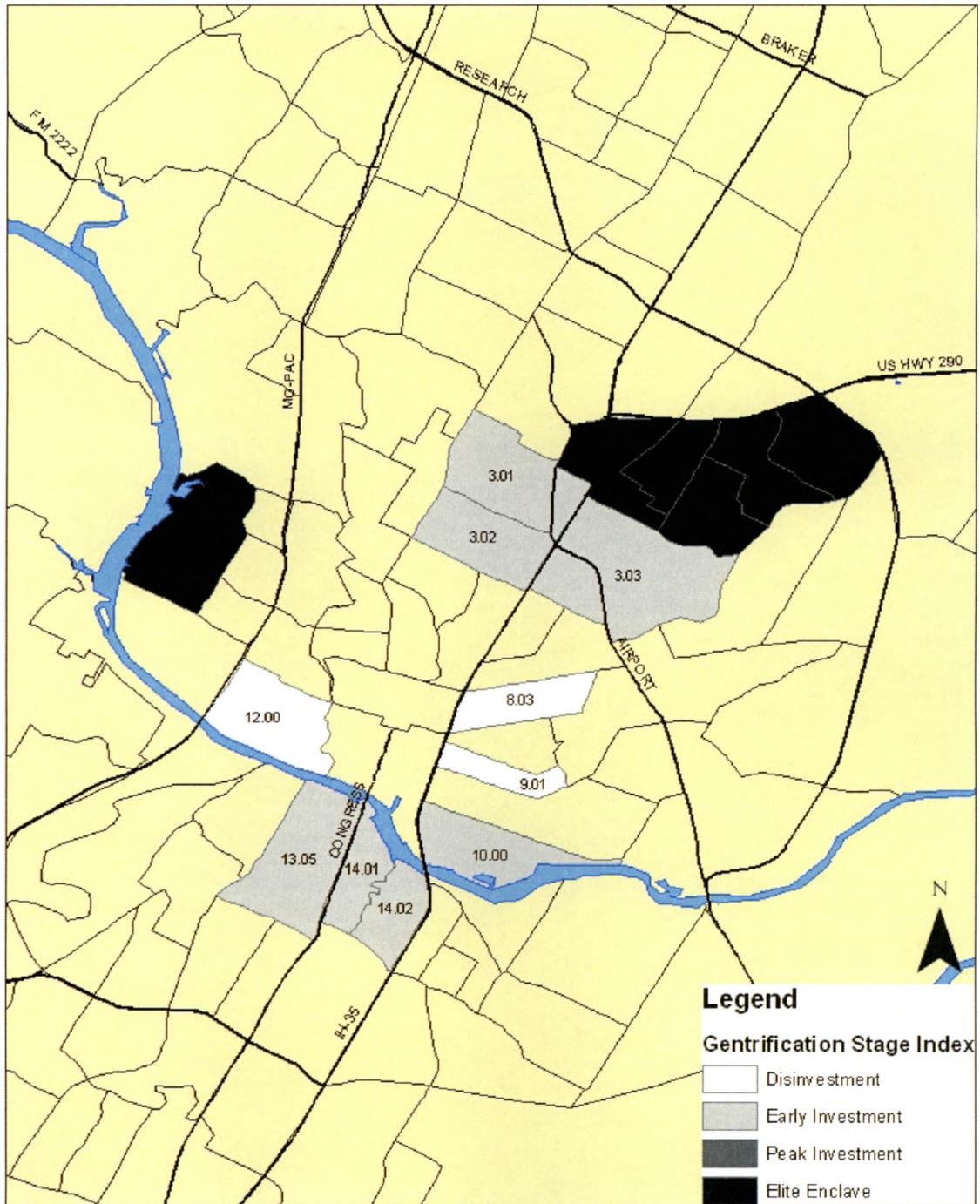


Figure 3
Gentrification stage index, 1970

0 0.5 1 2 Miles

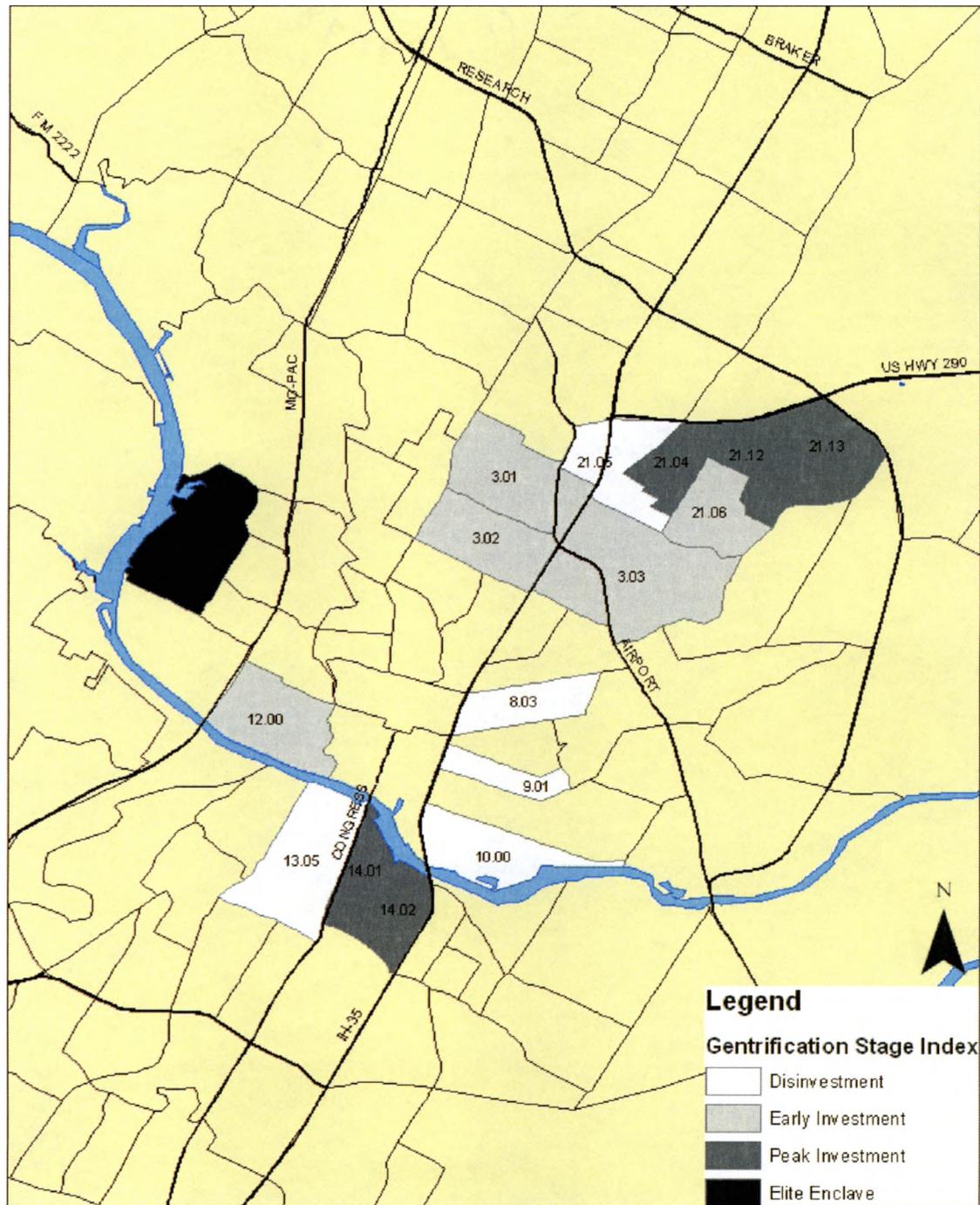


Figure 4
Gentrification stage index, 1980

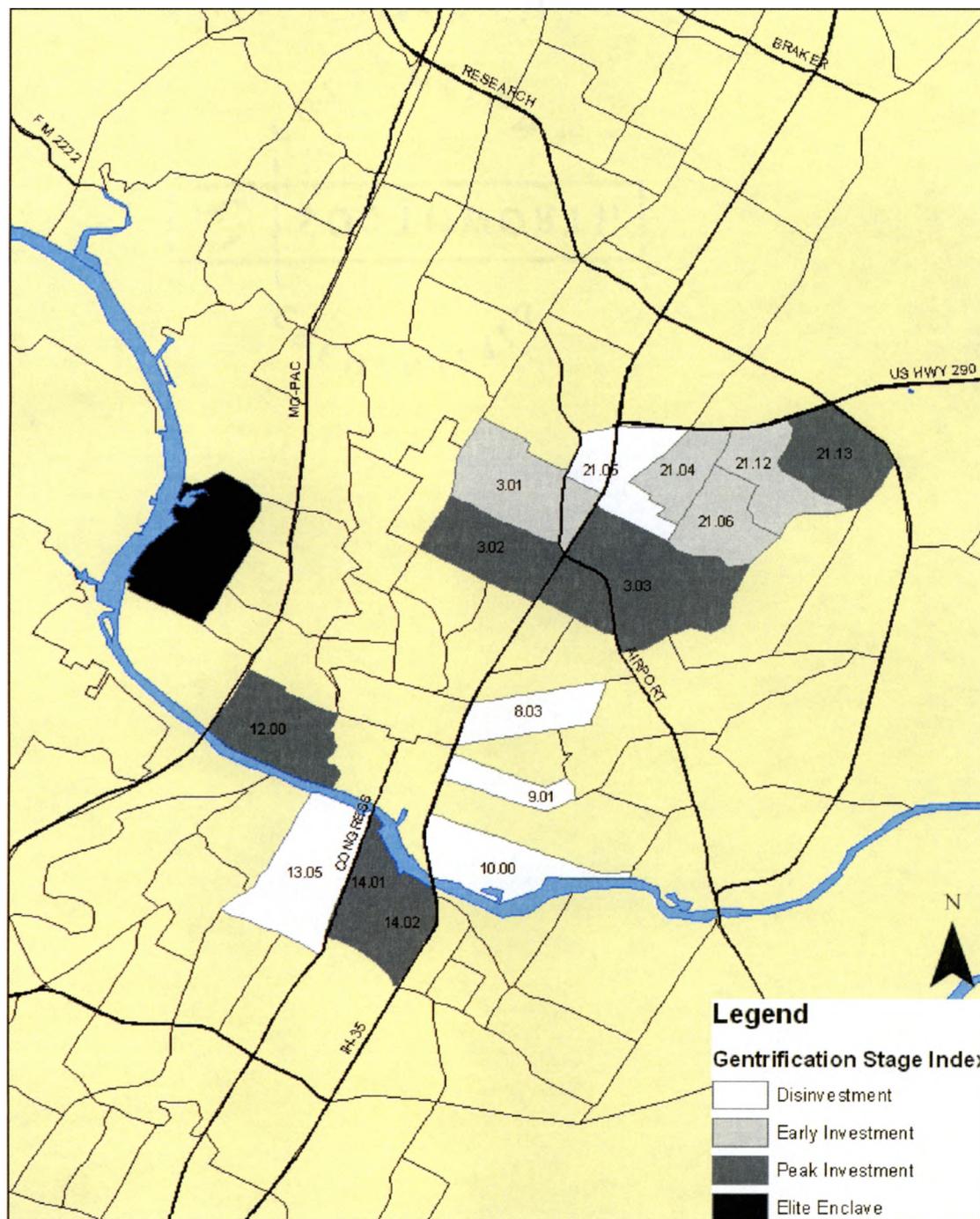


Figure 5
Gentrification stage index, 1990

0 0.5 1 2 Miles

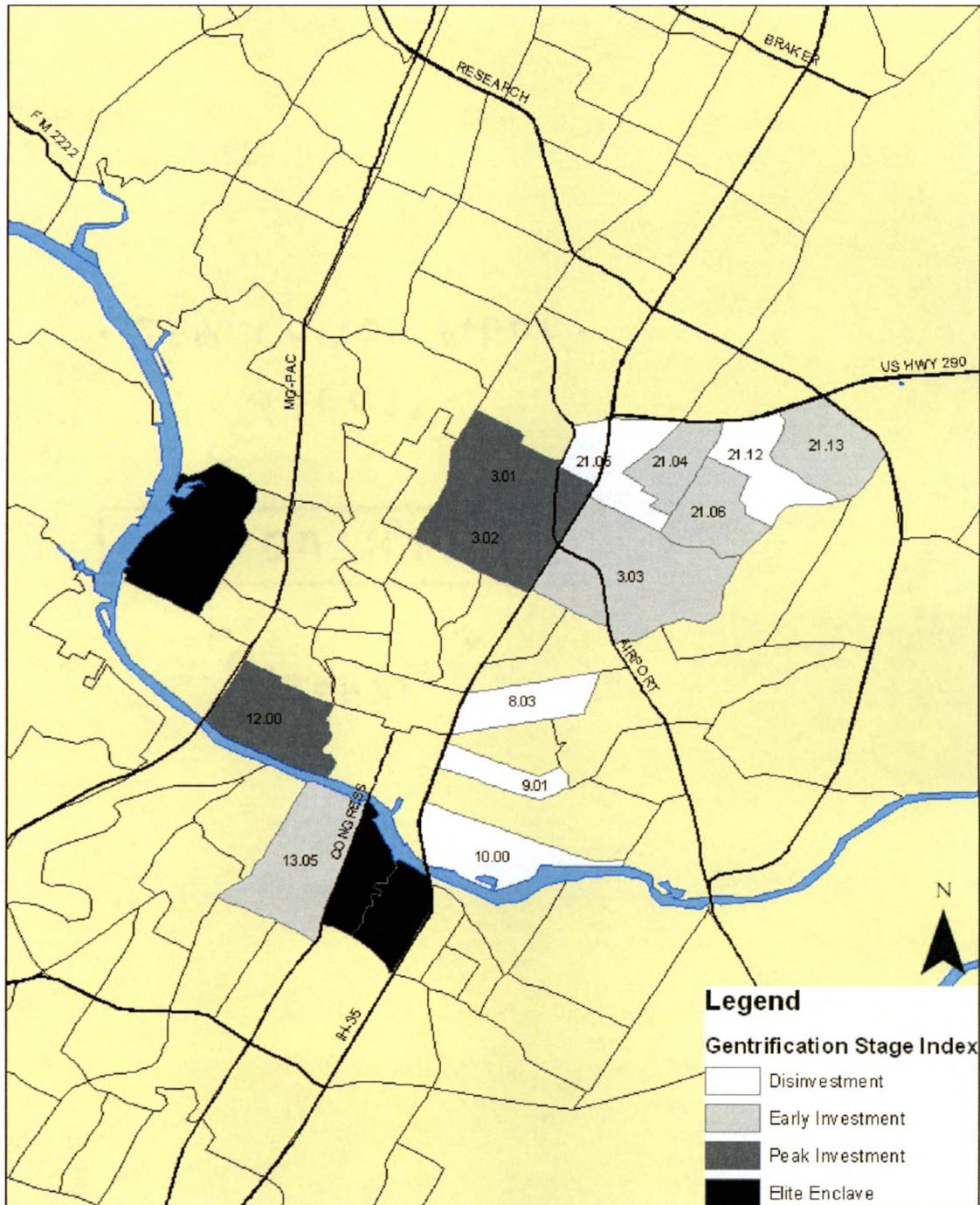


Figure 6
Gentrification stage index, 2000

score continued to climb but it remained in the peak investment stage. Tarrytown was again an elite enclave. University Heights and Windsor Park continued to experience disinvestment across the tracts of which they are a part.

In 2000, all of Hyde Park had reached the peak investment stage, while French Place actually declined to the early investment stage. This is most likely tied to the closing of the Robert Mueller Memorial Airport that was contained within the tract utilized for the French Place neighborhood. The East Austin tracts declined even more, with all scores approaching a stage of complete disinvestment. East Austin was ready for gentrification after continued disinvestment. Clarksville has reached a state of peak investment, and its GSI score has increased more than any other neighborhood. Bouldin Creek showed weak improvement again and reached a state of early investment. Travis Heights improved yet again, finally reaching elite enclave status. Tarrytown was an elite enclave with a GSI score of 3.85. Windsor Park and University Heights suffered further disinvestment. Between 1970 and 2000, Windsor Park and University heights have experienced the largest levels of disinvestment.

One can see the spatial variation of the GSI when it is mapped by census year. East Austin neighborhoods have experienced continual disinvestment in spite of redevelopment efforts. These neighborhoods contain older housing stock that is cheap when compared to housing in other Austin neighborhoods. Considerable risks remain to investment, but the city has taken an active role in promoting redevelopment. Hyde Park and French Place have demonstrated steady growth between 1970 and 2000. Bouldin Creek, Travis Heights, Tarrytown, and Clarksville all achieved high levels of

investment during the 30-year period. Clarksville has the greatest gains of any census tract under investigation.

Windsor Park and University Hills were desirable suburban locations in 1970, but through continued suburban growth the neighborhoods began their decline. The two areas had declined considerably by 2000. This is most likely a result of a combination of factors. First, as Austin suburbanized, newer and more attractive areas attracted suburbanites away from University Hills and Windsor Park. By 1970 this area had been established for approximately 20 years and was no longer located on the urban fringe. Second, continued reinvestment in Austin's poorer urban neighborhoods has forced local populations to relocate to the cheaper inner suburban areas.

Discussion

Data limitations have made analysis problematic. It appears that average rent data from 1970 are inaccurate (one tract returns a value of \$1,448, nearly \$8,000 in 2009 dollars). These incorrect data have rendered inconclusive results for 1970. Also, changes in the census tract data collected by the U.S. Census Bureau between 1970 and 1980 make comparisons regarding housing affordability complicated. In 1970, the data represent aggregate housing costs or property value, while the data represent the tract median value in 1980.

Hyde Park and French Place neighborhoods experienced increased investment between 1970 and 2000. The only exception to this was in 2000 the tract identified with French Place fell into a state of disinvestment. The change in gentrification status is most likely linked to the closing Robert Mueller Airport in 1999. The airport was adjacent to French Place and appears to have impacted the neighborhood. Hyde Park had not reached a period of peak investment by 2000. Growth was steady over the previous 30 years and seems as if it will continue.

The confluence of a few factors has most likely moderated gentrification in Hyde Park. The city of Austin passed the Inner-City Neighborhoods Ordinance in 1984 that was designed to maintain the quaint neighborhood atmosphere of several parts of the city, including Hyde Park (City of Austin 2008). The ordinance required all development that was not a single-family housing or a duplex to generate a site plan. The real estate

collapse of the late 1980s, which drove down housing prices across Austin, prevented housing prices in Hyde Park from skyrocketing. Finally, Hyde Park's proximity to UT has kept housing prices low because many of its residents are UT faculty, staff, and students.

The University of Texas has created a unique situation surrounding its campus. The housing stock in the area is ideal for gentrification (e.g., 1930s bungalows), and there is an abundance of highly educated individuals. Despite its suitable conditions for gentrification, the area has been slow to do so for a couple of reasons. First, UT students rent a significant amount of housing near campus and they represent a relatively transient population without sufficient economic capital to invest in the housing stock. Also, UT continues to encroach on Hyde Park as the campus expands.

Census tracts in East Austin had not entered in any stage of reinvestment as of the 2000 census. They have experienced a prolonged period of disinvestment and are the most likely places for new gentrification to occur in Austin. Anecdotal evidence suggests that these neighborhoods are the center of gentrification in Austin recently. Home sale prices increased more than 250% between 2000 and 2007, and, as a result, property taxes in East Austin are on the rise (Gregor 2007).

East Austin has been the target of programs to jumpstart redevelopment in the past. The much maligned urban renewal projects of the 1960s and 70s promised to remake the dying parts of the city. Efforts to spark reinvestment in East Austin to no avail (Lindell 1991). The urban renewal projects razed houses in Blackshear and failed to construct any new housing stock, leaving the area with vacant lots and less housing.

Current redevelopment efforts may be more successful because they involve a citywide effort as opposed to the micro attempts of urban renewal, but the results remain to be seen. Local government involvement indicates that gentrification is not an entirely organic process in Austin (Lees 2000). Legislation incentivizes land-use intensification in East Austin and shows that the City of Austin has taken an active role in redeveloping the urban landscape.

There appear to be two separate groups of people who have affected gentrification in Austin. First, there is the group of affluent white individuals and families, who are mobile and possess economic capital. This group has driven the condominium craze in downtown Austin and is leading the charge into East Austin. This group of people differs from traditional gentrifiers because they occupy the space after it has been redeveloped instead of gentrifying it themselves. Second, there is the stable black community that emerged between 1970 and 2000. The black community has lower aggregate levels of education and does not possess the same levels of economic capital as the white population, but their impact is strong nonetheless.

Austin displays aspects of the revanchist city (Smith 1996). The city government has sponsored redevelopment projects in areas that have fallen in to disrepair (e.g. Zaragosa Park, East Sixth Street, East 11th Street, and East 12th Street). Renewal in these areas has come at the expense of low-income and minority residents. Rising property values drive out poor local residents who are unable to afford higher property taxes. El Concilio, Poder, and Michael Schlieffe are all a part of the gentrification resistance movement. On the other hand Austin also has shown aspects of the emancipatory city

by employing participatory planning. Promoting neighborhood self-determination has lessened the negative feelings of gentrification in some areas.

Gentrification and the Arts

Austin is known as a haven for artists and an active art scene has been intertwined with gentrification since SoHo emerged as a desirable place to live in New York City during the 1970s (Ley 2003). Artists generally do not have high incomes and they seek a place to live and work based primarily in economic pragmatism. Much like art, neighborhood transformation involves creating an attractive place out of rubbish. It is certainly a process of commodification. Artists also represent the leading edge of the middle-class; pushing beyond the traditional norms and conventions, making what was once unusual more acceptable (Ley 2003).

The eastside has been the epicenter of Austin's art scene for some time now. More than 100 art studios currently participate in the East Austin Studio Tour, an event intended to promote the local art scene. Not surprisingly, condominiums have been marketed to potential buyers as artists' lofts in an effort to attract more people to the area. The fact of the matter is that most artists are being priced out of their neighborhoods (Spencer 2008).

To extend this thought, it is interesting to examine gentrification in Austin through the lens of its omnipresent music scene. South by Southwest (SXSW) is one of Austin's large, annual art festivals that celebrates music and film. SXSW consists of parties, concerts, and film showings across Austin. It has recently spread into the Eastside. SXSW parties attract large crowds of people with a combination of cheap

drinks, live music, and a glorification of penury. Concerts are held in raw, gritty locations, such as poorly lit street corners or on rooftops, where the Lone Star flows freely (Pareles 2009).

The city of Austin and businesses promote these events as vital to the local “creative” economy. It is not an accident that SXSW events have crossed into East Austin, the City wants people to become more comfortable with the thought of living and playing in that area of the city. Large-scale events like SXSW are likely altering Austinites' perception of these areas by highlighting the area's artistic bent. These events are fueling demand for East Austin property. East Austin has traditionally been an undesirable part of Austin (Friedman 2004), but it is becoming “safer” with time due, in part, to events like SXSW. The proliferation of SXSW venues and disappearance of art studios are clear signs of what lies ahead for East Austin neighborhoods.

Conclusions

This thesis has attempted to identify factors that have affected gentrification in Austin, Texas between 1970 and 2000. Gentrification in Austin has been primarily driven by white, high-income, and educated people; what is unique is this group of people is really occupying a redeveloped space instead of actually gentrifying it. There is little evidence in this thesis to suggest that Austin's substantial Hispanic population has fostered a unique form of gentrification in the city. By employing principal components analysis across four separate censuses, this thesis has identified the role of mobile, affluent whites and a stable black community that shaped gentrification in Austin. Also, the results of the GSI indicate that East Austin was primed for gentrification as of 2000.

The common perception of gentrification as a process that naturally emerges through time and revitalizes a neighborhood is misleading. This has happened on occasion, but more often than not it is a process that is driven by private interests with the support of the local government (Smith 1996). Private companies make a handsome profit, while the local government is able to give a facelift to blighted sections of town. It is a win-win situation. The losers are the displaced residents who are forced to move through legal means (e.g., eminent domain) or through rising property taxes. Communities bear the brunt of the gentrification and see few of the benefits.

Future research on the process of gentrification in Austin should include more recent micro-level data to better determine where Austin currently changing. Research

might also address East Austin exclusively as that is where the city is promoting development. A separate line of investigation should address the proliferation of SXSW venues and the spread of gentrification in Austin. Lastly, research should explore the role of condominium development surrounding downtown Austin, as it is form of gentrification.

APPENDIX I

FREQUENCY TABLES

Frequencies of variables analyzed, 1970

Tract ID	Tract pop.	% Occ. Housing	Median Gross Rent	% white	% black	% Hispanic	% local mover	% with HS diploma, no college
3.01	5,697	0.9235	1,448	0.9847	0.0112	0.1141	0.2255	0.2366
3.02	5,088	0.9237	1,293	0.9847	0.0112	0.1142	0.2255	0.2364
3.03	2,152	0.9240	547	0.9847	0.0112	0.1143	0.2253	0.2366
8.03	2,996	0.9666	480	0.1672	0.8311	0.1469	0.2850	0.1812
9.01	2,635	0.9213	365	0.7746	0.2250	0.6960	0.2796	0.0810
10.00	5,463	0.8786	597	0.9844	0.0156	0.7662	0.1743	0.0751
12.00	3,492	0.9297	981	0.8895	0.1091	0.2520	0.2152	0.2141
13.05	5,419	0.9331	745	0.9552	0.0436	0.4019	0.7679	0.3059
14.01	2,020	0.9335	422	0.9955	0.0040	0.1010	0.2022	0.3150
14.02	2,222	0.9332	464	0.9955	0.0041	0.1013	0.2023	0.3146
16.04	4,337	0.9617	561	0.9779	0.0210	0.0618	0.1803	0.1627
21.04	2,955	0.9098	254	0.9519	0.0474	0.0569	0.2382	0.3303
21.05	3,060	0.9088	263	0.9520	0.0474	0.0569	0.2383	0.3302
21.06	2,514	0.9090	216	0.9519	0.0473	0.0569	0.2381	0.3303
21.12	3,536	0.9087	304	0.9519	0.0472	0.0568	0.2381	0.3304
21.13	3,241	0.9091	279	0.9519	0.0472	0.0571	0.2381	0.3302
<u>County Avg.</u>	<u>1,633</u>	<u>0.8998</u>	<u>211</u>	<u>0.9079</u>	<u>0.0675</u>	<u>0.1060</u>	<u>0.2404</u>	<u>0.2625</u>

Frequencies of variables analyzed, 1970 - Continued

Tract ID	% with college degree	% tech & professional employment	% exec., managers, and admin. employment	Unemployment rate	Poverty rate	Avg. HH income	% Occupied Housing
3.01	0.1379	0.2168	0.0778	0.0263	0.2145	6,697	0.3840
3.02	0.1379	0.2166	0.0774	0.0262	0.2146	6,696	0.3836
3.03	0.1383	0.2167	0.0775	0.0261	0.2147	6,696	0.3838
8.03	0.0613	0.0669	0.0381	0.0375	0.3745	5,210	0.4392
9.01	0.0112	0.0393	0.0346	0.0678	0.3791	5,096	0.4315
10.00	0.0034	0.0151	0.0532	0.0510	0.4316	5,497	0.5325
12.00	0.1590	0.2135	0.0348	0.0603	0.2973	5,817	0.2893
13.05	0.0418	0.1074	0.0580	0.0422	0.2216	6,908	0.5119
14.01	0.1973	0.2375	0.0980	0.0515	0.1678	8,509	0.4450
14.02	0.1979	0.2374	0.0979	0.0514	0.1679	8,508	0.4455
16.04	0.4604	0.4124	0.1608	0.0176	0.0742	14,365	0.6051
21.04	0.2514	0.2700	0.1314	0.0220	0.0423	12,231	0.6931
21.05	0.2513	0.2701	0.1316	0.0220	0.0422	12,239	0.6945
21.06	0.2514	0.2705	0.1310	0.0221	0.0422	12,234	0.6941
21.12	0.2517	0.2699	0.1313	0.0216	0.0421	12,239	0.6937
21.13	0.2519	0.2703	0.1315	0.0214	0.0423	12,232	0.6936
County Avg.	0.1954	0.2188	0.0977	0.0225	0.0977	10,195	0.5489

Frequencies of variables analyzed, 1980

Tract ID	Tract pop	% Occ. Housing	Median Gross Rent	% white	% black	% Hispanic	% local mover	% with HS diploma, no college
3.01	5,831	0.9485	244	0.8216	0.0281	0.1420	0.2650	0.1713
3.02	4,755	0.9628	235	0.8639	0.0305	0.0900	0.2702	0.1410
3.03	2,636	0.8919	249	0.6601	0.2064	0.1271	0.3855	0.2324
8.03	2,807	0.9205	177	0.0599	0.8429	0.0973	0.2190	0.2532
9.01	2,367	0.9024	187	0.0169	0.4461	0.5336	0.3565	0.1106
10.00	5,425	0.9588	182	0.1454	0.0105	0.8389	0.2637	0.1729
12.00	3,059	0.8858	199	0.7826	0.0324	0.1563	0.2859	0.1190
13.05	6,489	0.9122	221	0.4264	0.0885	0.4676	0.3278	0.2496
14.01	2,094	0.8896	270	0.8219	0.0258	0.1452	0.3385	0.1933
14.02	2,303	0.8889	270	0.8220	0.0256	0.1455	0.3390	0.1934
16.04	3,802	0.9649	356	0.9658	0.0000	0.0252	0.2101	0.0825
21.04	3,198	0.9627	290	0.8352	0.0657	0.0991	0.2643	0.3147
21.05	2,940	0.9000	272	0.6677	0.1221	0.1799	0.2634	0.2102
21.06	3,202	0.9695	286	0.7605	0.1330	0.1065	0.2484	0.3474
21.12	3,842	0.9447	323	0.6989	0.1874	0.1010	0.2804	0.2643
21.13	3,521	0.9444	323	0.6992	0.1874	0.1011	0.2807	0.2643
County Avg.	2,318	0.9115	309	0.7506	0.0874	0.1417	0.3106	0.2549

Frequencies of variables analyzed, 1980 - Continued

Tract ID	% with college degree	% tech & professional employment	% exec., managers, and admin. employment	Unemployment rate	Poverty rate	Avg. HH income	% Occupied Housing	Median mortgage
3.01	0.3473	0.2081	0.0764	0.0548	0.2504	10,696	0.2557	258
3.02	0.4528	0.3453	0.0845	0.0429	0.3018	10,893	0.2083	386
3.03	0.3517	0.2741	0.1296	0.0448	0.1726	16,978	0.3972	338
8.03	0.0850	0.0813	0.0295	0.0939	0.4006	8,293	0.4347	180
9.01	0.0395	0.0588	0.0206	0.1157	0.4782	9,029	0.4309	170
10.00	0.0575	0.0416	0.0320	0.0705	0.2747	11,868	0.4296	219
12.00	0.4973	0.2968	0.0835	0.0330	0.2330	12,118	0.2138	234
13.05	0.1239	0.1204	0.0630	0.0750	0.2951	13,081	0.2828	216
14.01	0.4119	0.2914	0.1156	0.0405	0.1357	16,290	0.3282	340
14.02	0.4118	0.2912	0.1158	0.0409	0.1359	16,303	0.3281	340
16.04	0.6664	0.4293	0.1904	0.0387	0.0484	37,235	0.7506	575
21.04	0.2545	0.1910	0.1212	0.0156	0.0789	19,155	0.5548	294
21.05	0.2633	0.1908	0.1035	0.0385	0.2143	12,859	0.1980	253
21.06	0.2949	0.2098	0.1292	0.0263	0.0620	21,062	0.6476	335
21.12	0.3552	0.2211	0.1648	0.0254	0.0687	23,761	0.6402	385
21.13	0.3554	0.2215	0.1646	0.0252	0.0689	23,748	0.6403	385
County Avg.	0.3016	0.2089	0.1260	0.0346	0.1184	21,915	0.5181	434

Frequencies of variables analyzed, 1990

Tract ID	Tract pop.	% Occ. Housing	Median Gross Rent	% white	% black	% Hispanic	% local mover	% with HS diploma, no college
3.01	5,517	0.8685	387	0.6908	0.0227	0.2231	0.3324	0.1472
3.02	4,941	0.9177	359	0.7545	0.0316	0.0840	0.2636	0.0698
3.03	2,070	0.7291	416	0.6101	0.1855	0.1715	0.3460	0.1501
8.03	1,995	0.7480	316	0.0777	0.7373	0.1850	0.3261	0.1768
9.01	1,878	0.8169	354	0.0351	0.5032	0.4617	0.2368	0.1604
10.00	4,629	0.9084	290	0.1214	0.0130	0.8533	0.3294	0.1993
12.00	3,116	0.8872	388	0.6816	0.0363	0.1656	0.3484	0.0799
13.05	5,547	0.8311	352	0.5203	0.0759	0.3862	0.3217	0.2077
14.01	2,123	0.8889	400	0.7687	0.0292	0.1856	0.3544	0.1357
14.02	2,335	0.8886	400	0.7687	0.0291	0.1859	0.3545	0.1351
16.04	3,651	0.9471	747	0.9663	0.0011	0.0310	0.2389	0.0380
21.04	3,116	0.9183	442	0.6033	0.1974	0.1804	0.3999	0.2428
21.05	3,129	0.7820	370	0.5136	0.1109	0.3484	0.3215	0.2719
21.06	2,749	0.8942	450	0.6159	0.2939	0.0829	0.3265	0.2570
21.12	3,729	0.8334	410	0.4524	0.3475	0.1899	0.4314	0.2426
21.13	3,418	0.8531	559	0.4564	0.3973	0.1363	0.3377	0.1978
County Avg.	3,185	0.8815	475	0.6589	0.1104	0.1948	0.3171	0.1943

Frequencies of variables analyzed, 1990 - Continued

Tract ID	% with college degree	% tech & professional employment	% exec., managers, and admin. employment	Unemployment rate	Poverty rate	Avg. HH income	% Occupied Housing	Median mortgage
3.01	0.4064	0.2849	0.1168	0.0767	0.3120	21,042	0.2392	686
3.02	0.5755	0.4042	0.0959	0.0341	0.3190	19,460	0.1785	834
3.03	0.4270	0.3414	0.1163	0.0587	0.1715	31,514	0.4823	704
8.03	0.0697	0.0604	0.0417	0.1596	0.3253	16,410	0.4576	483
9.01	0.0528	0.0884	0.0563	0.2186	0.2598	17,926	0.5205	630
10.00	0.0695	0.0449	0.0473	0.0794	0.3569	17,741	0.4291	447
12.00	0.5782	0.3454	0.1559	0.0687	0.2090	30,622	0.2204	1,000
13.05	0.2059	0.1954	0.1482	0.1093	0.3354	20,539	0.3120	550
14.01	0.5020	0.3323	0.1724	0.0558	0.1684	30,222	0.3259	858
14.02	0.5022	0.3321	0.1718	0.0554	0.1685	30,215	0.3258	858
16.04	0.7342	0.4352	0.2596	0.0196	0.0586	106,255	0.7309	1,549
21.04	0.2352	0.2365	0.1166	0.0661	0.1727	26,820	0.5284	601
21.05	0.1881	0.1561	0.0898	0.1182	0.4204	16,482	0.1335	588
21.06	0.2737	0.2764	0.1976	0.0620	0.1884	38,282	0.7006	598
21.12	0.2298	0.2128	0.1064	0.0913	0.2395	29,130	0.3893	671
21.13	0.3267	0.2146	0.2011	0.0507	0.0830	42,048	0.7404	710
County Avg.	0.3465	0.2426	0.1594	0.0619	0.1549	33,660	0.4577	862

Frequencies of variables analyzed, 2000

Tract ID	Tract pop	% Occ. Housing	Median			% Hispanic	% local mover	% with HS diploma, no college
			Gross Rent	% white	% black			
3.01	6,364	0.9645	669	0.6969	0.0222	0.2249	0.2948	0.1164
3.02	5,100	0.9641	598	0.7618	0.0108	0.0925	0.2634	0.0771
3.03	2,952	0.9812	663	0.4719	0.1325	0.3848	0.3914	0.1512
8.03	2,334	0.8999	548	0.1071	0.4683	0.4160	0.2833	0.2793
9.01	1,784	0.8937	590	0.0846	0.3470	0.5667	0.3064	0.2197
10.00	4,644	0.9778	431	0.1365	0.0189	0.8383	0.2188	0.2059
12.00	2,987	0.9095	581	0.7600	0.0362	0.1061	0.2891	0.0640
13.05	5,659	0.9590	616	0.4787	0.1037	0.4068	0.3964	0.1783
14.01	2,532	0.9140	751	0.8100	0.0190	0.1351	0.2799	0.1008
14.02	2,632	0.9651	669	0.7454	0.0422	0.2029	0.3017	0.0695
16.04	3,911	0.9572	1,113	0.9486	0.0013	0.0348	0.2395	0.0320
21.04	3,128	0.9764	776	0.4968	0.0988	0.3913	0.2886	0.1429
21.05	5,075	0.9732	639	0.3482	0.1330	0.4660	0.3084	0.1806
21.06	3,260	0.9713	637	0.3939	0.1840	0.3966	0.2662	0.2420
21.12	5,854	0.9221	670	0.1833	0.2518	0.5526	0.3409	0.2457
21.13	4,092	0.9757	659	0.2886	0.3839	0.3150	0.3001	0.2620
<hr/>								
County								
Avg	4,488	0.9550	659	0.5766	0.0980	0.2726	0.2912	0.1734

Frequencies of variables analyzed, 2000 - Continued

Tract ID	% with college degree	% tech & professional employment	% exec., managers, and admin. employment	Unemployment rate	Poverty rate	Avg. HH income	% Occupied Housing	Median mortgage
3.01	0.5333	0.3594	0.1284	0.0424	0.2264	41,789	0.2715	1,075
3.02	0.6952	0.4317	0.1348	0.0458	0.2330	43,503	0.2294	1,424
3.03	0.3832	0.3233	0.1070	0.0516	0.2144	44,255	0.3831	1,254
8.03	0.1057	0.1333	0.0768	0.1033	0.1892	45,549	0.5361	680
9.01	0.1123	0.1258	0.0501	0.1075	0.1854	39,747	0.4375	767
10.00	0.0795	0.1153	0.0369	0.1029	0.2363	27,264	0.4521	580
12.00	0.7089	0.4995	0.1498	0.0186	0.1043	59,992	0.3567	1,319
13.05	0.3491	0.2671	0.1131	0.0512	0.1810	45,941	0.3446	988
14.01	0.6050	0.3297	0.2491	0.0155	0.0636	57,533	0.2902	1,347
14.02	0.6221	0.3481	0.1657	0.0180	0.1132	61,941	0.4032	1,428
16.04	0.8008	0.5393	0.2185	0.0134	0.0353	151,910	0.7944	2,561
21.04	0.3343	0.2142	0.0900	0.0463	0.1106	46,154	0.6072	863
21.05	0.1856	0.2036	0.0496	0.0524	0.2865	31,361	0.1434	845
21.06	0.2575	0.2246	0.1506	0.0446	0.1696	60,021	0.6675	910
21.12	0.1295	0.1050	0.0536	0.0614	0.2109	38,239	0.3468	833
21.13	0.2382	0.2058	0.1148	0.0421	0.1052	58,749	0.7285	920
County Avg.	0.4062	0.2742	0.1618	0.0422	0.1291	56,025	0.5148	920

APPENDIX II

GENTRIFICATION STAGE INDEX RESULTS

Results of GSI for all census tracts, 1970

Tract ID	% white	% black	% Hispanic	% local mover	% with HS diploma, no college	% with college degree	% tech & professional employment	% exec, managers, and admin. employment	Unemploy-ment rate	Poverty rate	Avg. HH income	% Occupied Housing	GSI Avg
3 01	3	4	3	2	3	1	2	1	2	1	1	1	2 00
3 02	3	4	3	2	3	1	2	1	2	1	1	1	2 00
3 03	3	4	3	2	3	1	2	1	2	1	1	1	2 00
8 03	1	1	1	3	4	1	1	1	1	1	1	2	1 50
9 01	2	1	1	3	4	1	1	1	1	1	1	1	1 50
10 00	3	4	1	1	4	1	1	1	1	1	1	2	1 75
12 00	2	2	1	2	3	2	2	1	1	1	1	1	1 58
13 05	3	4	1	4	2	1	1	1	1	1	1	2	1 83
14 01	3	4	3	2	1	3	3	3	1	1	2	2	2 33
14 02	3	4	3	2	2	3	3	3	1	1	2	2	2 42
16 04	3	4	4	1	4	4	4	4	2	3	4	3	3 33
21.04	3	4	4	2	2	4	4	4	3	3	3	4	3 33
21 05	3	4	4	2	2	4	4	4	3	3	4	4	3 42
21 06	3	4	4	2	2	4	4	4	3	3	3	4	3 33
21 12	3	4	4	2	2	4	4	4	3	3	4	4	3 42
21 13	3	4	4	2	2	4	4	4	3	3	3	4	3 33

Results of GSI for all census tracts, 1980

Tract ID	% white	% black	% Hispanic	% local mover	% with HS diploma, no college	% with college degree	% tech & professional employment	% exec, managers, and admin employment	Unemp rate	Pov rate	Avg HH income	% Occupied Housing	Median mortgage	GSI Avg
3.01	3	4	2	2	4	3	2	1	1	1	1	1	1	2 00
3.02	3	4	4	2	4	4	4	1	1	1	1	1	2	2 46
3.03	2	1	3	4	3	3	4	3	1	1	1	1	1	2 15
8 03	1	1	4	1	3	1	1	1	1	1	1	2	1	1 46
9 01	1	1	1	3	4	1	1	1	1	1	1	2	1	1 46
10 00	1	4	1	2	4	1	1	1	1	1	1	2	1	1 62
12 00	2	4	2	2	4	4	4	1	3	1	1	1	1	2 31
13 05	1	3	1	3	3	1	1	1	1	1	1	1	1	1 46
14 01	3	4	2	3	4	4	4	2	2	2	1	1	1	2 54
14 02	3	4	2	3	4	4	4	2	2	2	1	1	1	2 54
16.04	3	4	4	1	4	4	4	4	2	4	4	4	4	3 54
21 04	3	4	4	2	1	2	2	2	4	4	2	3	1	2 62
21 05	2	1	1	2	3	2	2	2	2	1	1	1	1	1 62
21 06	2	1	4	1	1	2	3	3	4	4	2	4	1	2 46
21 12	2	1	4	2	2	3	3	4	4	4	3	4	2	2 92
21 13	2	1	4	2	2	3	3	4	4	4	3	4	2	2 92

Results of GSI for all census tracts, 1990

Tract ID	% white	% black	% Hispanic	% local mover	% with HS diploma, no college	% with college degree	% tech & professional employment	% exec, managers, and admin employment	Unemp rate	Pov rate	Avg. HH income	% Occupied Housing	Median mortgage	GSI Avg
3 01	2	4	2	3	4	3	3	1	1	1	1	1	1	2.08
3.02	3	4	4	2	4	4	4	1	4	1	1	1	2	2.69
3.03	2	1	3	3	4	4	4	1	3	2	2	3	2	2.62
8.03	1	1	3	3	3	1	1	1	1	1	1	2	1	1.54
9.01	1	1	1	1	3	1	1	1	1	1	1	3	1	1.31
10.00	1	4	1	3	2	1	1	1	1	1	1	2	1	1.54
12 00	2	4	3	3	4	4	4	2	2	1	2	1	3	2.69
13 05	1	4	1	3	2	1	2	2	1	1	1	1	1	1.62
14 01	3	4	3	3	4	4	4	3	3	2	2	1	2	2.92
14.02	3	4	3	3	4	4	4	3	3	2	2	1	2	2.92
16.04	4	4	4	1	4	4	4	4	4	4	4	4	4	3.77
21.04	2	1	3	4	1	1	2	1	2	2	1	4	1	1.92
21.05	1	3	1	3	1	1	1	1	1	1	1	1	1	1.31
21.06	2	1	4	3	1	1	3	4	2	1	3	4	1	2.31
21 12	1	1	3	4	1	2	2	4	1	1	2	2	1	1.92
21 13	1	1	4	3	2	2	2	4	3	4	4	4	2	2.77

Results of GSI for all census tracts, 2000

Tract ID	% white	% black	% Hispanic	% local mover	% with HS diploma, no college	% with college degree	% tech & professional employment	% exec, managers, and admin employment	Unemp rate	Pov rate	Avg HH income	% Occupied Housing	Median mortgage	GSI Avg.
3.01	2	4	3	3	4	4	4	1	2	1	1	1	3	2.54
3.02	3	4	4	2	4	4	4	2	2	1	1	1	4	2.77
3.03	1	1	1	4	3	2	3	1	1	1	1	1	4	1.85
8.03	1	1	1	2	1	1	1	1	1	1	2	3	1	1.31
9.01	1	1	1	3	1	1	1	1	1	1	1	2	2	1.31
10.00	1	4	1	1	2	1	1	1	1	1	1	2	1	1.38
12.00	3	4	4	2	4	4	4	2	4	3	3	1	4	3.23
13.05	1	2	1	4	2	2	2	1	1	1	2	1	3	1.77
14.01	3	4	4	2	4	4	4	4	4	4	3	1	4	3.46
14.02	3	4	4	3	4	4	4	3	4	3	3	1	4	3.38
16.04	4	4	4	2	4	4	4	4	4	4	4	4	4	3.85
21.04	1	3	1	2	3	2	1	1	2	3	2	3	2	2.00
21.05	1	1	1	3	2	1	1	1	1	1	1	1	2	1.31
21.06	1	1	1	2	1	1	2	2	2	1	3	4	2	1.77
21.12	1	1	1	3	1	1	1	1	1	1	3	1	2	1.38
21.13	1	1	2	3	1	1	1	1	3	3	3	4	3	2.08

REFERENCES

- Aitken, S. 1990. Local evaluations of neighborhood change. *Annals of the Association of American Geographers* 80: 247-67.
- Aronowitz, S. 1979. The Professional-Managerial Class or Middle Strata. In *Between Labor and Capital*, ed. P. Walker. Boston: South End Press.
- Atkinson, R. 2004. The evidence on the impact of gentrification: New lessons for the urban renaissance? *European Journal of Housing Policy* 4: 107-31.
- Badcock, B. 1989. Smith's rent gap hypothesis: An Australian view. *Annals of the Association of American Geographers* 79: 125-45.
- Beauregard, R. 2003. *Voices of Decline: The Postwar Fate of U.S. Cities* (2nd ed.). New York: Routledge.
- Berry, B. 1973. *The Human Consequences of Urbanization*. London: Macmillan.
- . 1980. Inner city futures: An American future revisited. *Transactions of the Institute of British Geographers* 1: 1-28.
- . 1985. Islands of Renewal in Seas of Decay. In *The New Urban Reality*, ed. P. E. Peterson. Washington, DC: Brookings Institution.
- Birch, D. 1979. *The Behavioral Foundations of Neighborhood Change*. Washington, DC.: Center for Urban Studies.
- Blomley, N. 2004. *Unsettling the City: Urban Land and the Politics of Property*. New York: Routledge.
- Bourne, L. 1993. The demise of gentrification? A commentary and prospective view. *Urban Geography* 14: 95-107.
- Brenner, N. and Theodore, N. 2002. Cities and the geographies of "actually existing neoliberalism." *Antipode* 34: 349-79.

- Brinegar, S. and Leonard, J. 2008. Poverty and affluence: A comparative analysis of economic segregation in metropolitan Cincinnati, Cleveland, and Columbus, Ohio, 1970-2000. *Urban Geography* 29: 581-606.
- Bruce-Briggs, B. 1979. *The New Class?* New Brunswick: Transaction Books.
- Buitrago, K. 2003. Historic preservation and gentrification: A policy link: an empirical analysis of East Austin, Texas. Austin: University of Texas at Austin.
- Carpenter, J. and Lees, L. 1995. Gentrification in New York, London and Paris: An international comparison. *International Journal of Urban and Regional Research* 19: 287-303.
- Caufield, J. 1989. Gentrification and desire. *Canadian Review of Sociology and Anthropology* 26: 617-32.
- Choko, M. and Harris, R. 1990. The local culture of property: A comparative history of housing tenure in Montreal and Toronto. *Annals of the Association of American Geographers* 80: 73-95.
- City of Austin. 1929. *A City Plan*. Obtained from:
http://www.ci.austin.tx.us/zoning/com_plan.htm (last accessed 13 November 2008).
- . 1986. Comprehensive watershed ordinance. Obtained from:
<http://www.ci.austin.tx.us/watershed/ordinances.htm> (last accessed 28 February 2009).
- . 1991. Urban watersheds ordinance. Obtained from:
<http://www.ci.austin.tx.us/watershed/ordinances.htm> (last accessed 28 February 2009).
- . 1992. Save our springs ordinance. Obtained from:
<http://www.ci.austin.tx.us/watershed/ordinances.htm> (last accessed 28 February 2009).
- . 1997. Smart growth initiative. Obtained from:
<http://www.ci.austin.tx.us/smartgrowth/default.htm> (last accessed 1 March 2009).
- . 1999a. Central urban redevelopment (CURE) combining district. Obtained from:
http://www.ci.austin.tx.us/downtown/pl_cure.htm (last accessed 5 March 2009).

- . 1999b. 11th and 12th streets community redevelopment project. Obtained from: <http://www.ci.austin.tx.us/downtown/0701/11th-12th0701.htm> (last accessed 27 February 2009).
- . 2001. Austin urban areas census tracts. Obtained from: http://www.ci.austin.tx.us/census/downloads/urban_tracts.pdf (last accessed 21 March 2009).
- . 2004. East sixth street public improvement district. Obtained from: <http://www.ci.austin.tx.us/downtown/> (last accessed 1 March 2009).
- . 2008. City of Austin growth and development initiatives, policies, and ordinances—1979-2000. Obtained from: <http://www.cityofaustin.org/edims/document.cfm?id=12462> (last accessed 1 March 2009).
- Clark, E. 1987. *The Rent Gap and Urban Change: Case studies in Malmo, 1860-1985*. Lund: Lund University Press.
- 1995. The rent gap re-examined. *Urban Studies*. 32: 1489-1503.
- Crowder, K. and South, S. 2005. Race, class, and changing patterns of migration between poor and nonpoor neighborhoods. *American Journal of Sociology* 110: 1715-63.
- Cybrivsky, R. A. 1978. Social aspects of neighborhood change. *Annals of the Association of American Geographers* 68: 17-33.
- Downs, A. 1981. *Neighborhoods and Urban Development*. Washington, DC: Brookings Institution.
- . 1983. Some changing aspects of neighborhoods in the United States. *Urban Law and Policy* 6: 65-74.
- Ehrenreich, B. and Ehrenreich, J. 1979. The professional-managerial class or middle strata. In *Between Labor and Capital*, ed. P. Walker. Boston: South End Press.
- Florida, R. 2002. *The Rise of the Creative Class: And how it's transforming work, leisure, community and everyday life*. New York: Basic Books.
- Frey, W. 1996. Immigration, domestic migration, and demographic Balkanization in America: New evidence from the 1990s. *Population and Development Review* 22: 741-63.
- Friedman, K. 2004. *The Great Psychedelic Armadillo Picnic*. New York: Crown Journeys.

- Gale, D. E., 1984. *Neighborhood Revitalization and the Postindustrial City*. Lexington, Lexington Books.
- Glass, R. 1964. Introduction. In *London: Aspects of change*, ed. R. Glass. London: MacGibbon and Kee.
- GeoLytics, Inc. 2003. *Neighborhood Change Database*. East Brunswick.
- Goldberg, M. and Mercer, J. 1986. *The myth of the North American city: Continentalism challenged*. Vancouver: University of British Columbia Press.
- Gould, A. 1981. The salaried middle class in the corporatist welfare state. *Policy and Politics* 9: 4.
- Gregor, K. 2007. Community convergences: The Eastside perspective. *Austin Chronicle* 9 November 2007.
- Grigsby, W., Baratz, M., Galster, G., and Maclennan, D. 1987. The dynamics of neighborhood change and decline. *Progress in Planning* 1:1-76.
- Hackworth, J. 2002. Postrecession gentrification in New York City. *Urban Affairs Review* 6: 815-43.
- Hankins, K. 2007. The final frontier: Charter schools as new community institutions of gentrification. *Urban Geography* 28: 113-28.
- Hanlon, B. and Vicino, T. 2007. The fate of inner suburbs: Evidence from metropolitan Baltimore. *Urban Geography* 28: 249-75.
- Harvey, D. 2000. *Spaces of Hope*. Edinburgh: Edinburgh University Press.
- Hoyt, H. 1939. *The Structure and Growth of Residential Neighborhoods in American Cities*. Washington, DC: Federal Housing Administration.
- Holoubek, J. 2000. Gentrification and crime in Austin, 1980-1990. San Marcos: Southwest Texas University.
- Humphrey, D. 1997. *Austin: A history of the capital city*. Austin: Texas State Historical Association.
- Joassart-Marcelli, P., Musso, J., and Wolch, J. 2005. Fiscal consequences of concentrated poverty in a metropolitan region. *Annals of the Association of American Geographers* 95: 336-56.

- Johnston, R. J. 1978. *Multivariate statistical analysis in geography: A primer on the general linear model*. New York: Longman.
- Kern, L. 2007. Reshaping the boundaries of public and private life: Gender, condominium development, and the neoliberalization of urban living. *Urban Geography* 28: 657-81.
- Laska, S. and Spain, D. 1980. *Back to the City: Issues in Neighborhood Renovation*. Elmsford: Pergamon Press.
- Lees, L. 1994. Rethinking gentrification: Towards a geography of gentrification. *Progress in Human Geography* 18: 137-50.
- . 2000. A re-appraisal of gentrification: Towards a geography of gentrification. *Progress in Human Geography* 24: 389-405.
- . 2003. Super-gentrification: The case of Brooklyn Heights, New York City. *Urban Studies* 12: 2487-2509.
- Leven, C. L., Little, J. T., Nourse, H. O., and Reed, R. B. 1976. *Neighborhood Change: Lessons in the Dynamics of Urban Decay*. New York: Praeger.
- Ley, D. 1996. *The New Middle Class and the Remaking of the Central City*. Oxford: Oxford University Press.
- . 2003. Artists, aestheticisation and the field of gentrification. *Urban Studies* 40: 2527-44.
- Lindell, C. 1991. Blackshear residents grow weary of renewal. *Austin American-Statesman* 2 October: A8.
- Lyons, M. 1996. Gentrification, socioeconomic change, and the geography of displacement. *Journal of Urban Affairs* 18: 39-62.
- MacLeod, G. and Ward, K. 2002. Spaces of utopia and dystopia: Landscaping the contemporary city. *Geografiska Annaler. Series B, Human Geography* 84: 153-70.
- Martin, D. 2003. Enacting neighborhood. *Urban Geography* 24: 361-85.
- Massey, D., Gross, A., and Shibuya, K. 1994. Migration, segregation, and the geographic concentration of poverty. *American Sociological Review* 59: 424-45.

- Mercer, J. 1991. The Canadian city in continental context: Global and continental perspectives on Canadian urban development. In *Canadian Cities in Transition*, ed. T. Bunting and P. Filion. Oxford: Oxford University Press.
- Miller, S. 1965. The new middle class. In *Blue collar worker*, ed. A. Shostak and W. Gomberg. Englewood Cliffs: Harper and Row.
- Mitchell, D. 1997. The Annihilation of Space by Law: the roots and implications of anti-homeless laws in the United States. *Antipode* 29: 303-35.
- Moore, S. 1972. *Residential mobility in the city*. Resource paper, Commission on College Geography, Association of American Geographers, No. 13, Washington, DC.
- Moore, K. 2009. Gentrification in black face?: The return of the black middle class to urban neighborhoods. *Urban Geography* 30: 118-42.
- Pareles, J. 2009. Stoking careers in the frenzy of South by Southwest. *New York Times* 22 March. Obtained from: <http://www.nytimes.com/2009/03/23/arts/music/23sxsw.html> (last accessed 23 March 2009).
- Pahwa, C. 2001. Evaluating the Effects of Gentrification on Small Businesses in Austin, Texas. Austin: University of Texas at Austin.
- Park, R. E., Burgess, E., and McKenzie, R. 1967. *The City*. Chicago: University of Chicago Press.
- Phillips, M. 2004. Other geographies of gentrification. *Progress in Human Geography* 28: 5-30.
- Podagrosi, A. and Vojnovic, I. 2008. Tearing down freedman's town and African American displacement in Houston: The good, the bad, and the ugly of urban revival. *Urban Geography* 29: 371-401.
- Quillian, L. 1999. Migration patterns and the growth of high-poverty neighborhoods, 1970-1990. *American Journal of Sociology* 105: 1-37.
- Redfern, P. 1997. A new look at gentrification: 1. Gentrification and domestic technologies. *Environment and Planning A* 29: 1275-96.
- Robinson, R. No date. City of Austin, The top ten big demographic trends in Austin, Texas. Obtained from: <http://www.ci.austin.tx.us/demographics/> (last accessed 25 February 2009).

- Robinson, R. 2008a. City of Austin, Austin area population histories and forecasts. Obtained from: <http://www.ci.austin.tx.us/demographics/> (last accessed 22 September 2008).
- Robinson, R. 2008b. City of Austin, City of Austin demographic profile. Obtained from: <http://www.ci.austin.tx.us/demographics/> (last accessed 9 March 2009).
- Schwartz, J. 2005. East Austin's changing landscape: Urban-style condominiums are bringing lofty hopes, fears of gentrification to a historically Latino neighborhood. *Austin American-Statesman* 30 January.
- Shevsky, E. and Bell, W. 1955. *Social Area Analysis*. Stanford: Stanford University.
- Short, J. R. 1978. Residential mobility. *Progress in Human Geography* 1: 419-47.
- Slater, T. 2002. Looking at the "North American City" through the lens of gentrification discourse. *Urban Geography* 23: 131-153.
- . 2006. The eviction of critical perspectives from gentrification research. *International Journal of Urban and Regional Research* 30: 737-57.
- Smith, D. 2002. Extending the temporal and spatial limits of gentrification: A research agenda for population geographers. *International Journal of Population Geography* 8: 385-94.
- Smith, D. and Holt, L. 2007. Studentification and "apprentice" gentrifiers within Britain's provincial towns and cities: Extending the meaning of gentrification. *Environment and Planning A* 39: 142-61.
- Smith, N. 1979. Toward a theory of gentrification: a back to the city movement by capital not people. *Journal of the American Planners Association* 45: 538-48.
- . 1987. Gentrification and the rent-gap. *Annals of the Association of American Geographers* 3: 462-65.
- . 1996. *The New Urban Frontier: Gentrification and the revanchist city*. London: Routledge.
- . 2002. New globalism, new urbanism: Gentrification as a global urban strategy. *Antipode* 34: 427-50.
- South, S. and Crowder, K. 1997. Escaping distressed neighborhoods: Individual, community, and metropolitan influences. *American Journal of Sociology* 102: 1040-84.

- Spencer, M. 2008. After setting East Austin vibe, artists being priced out of it. *Austin American-Statesman* 22 November: A1.
- Swanstrom, T., Dreier, P., and Mollendopf, J. 2002. Economic inequality and public policy: The power of place. *City & Community* 1: 349-72.
- U.S. Census Bureau. 10 July 2008. Table 2: Cumulative estimates of population change for incorporated places over 100,000, ranked by percent change: April 1, 2000 to July 1, 2007 (SUB-EST2007-02). Obtained from: <http://www.census.gov/popest/cities/cities.html> (last accessed 23 November 2008).
- . 2008. Fact Sheet: 2005-2007 American Community Survey 3-year Estimates. Obtained from <http://factfinder.census.gov/> (last accessed 23 February 2009).
- Van Crielingen, M. and Decroly, J. 2003. Revisiting the diversity of gentrification: Neighbourhood renewal processes in Brussels and Montreal. *Urban Studies* 40: 2451-68.
- Walks, R. and Maaranen, R. 2008. Gentrification, social mix, and social polarization: Testing the linkages in large Canadian cities. *Urban Geography* 29: 293-326.
- Wyly, E. and Hammel, D. 1998. Modeling the context and contingency of gentrification. *Journal of Urban Affairs* 20: 303-26.
- . 1999. Islands of decay in seas of renewal: Housing policy and the resurgence of gentrification. *Housing Policy Debate* 10: 710-71.
- Yeates, M. 1997. *The North American City* (5th ed.). New York: Longman.
- Yeates, M. and Garner, B. 1976. *The North American City* (2nd ed.). New York: Harper and Row.
- Zube, E. H. and Sell, J. 1986. Human dimensions of environmental change. *Journal of Planning Literature* 1: 162-76.
- Zukin, S. 1987. Gentrification: Culture and capital in the urban core. *Annual Review of Sociology* 13:129-47.
- Zussman, R. 1984. The middle levels: Engineers and the 'working middle class.' *Politics and Society* 3: 217-237.

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