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REBECCA ANN NEES
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THE CONCENTRATION OF AFFLUENCE IN THE U.S. FROM 1990 TO 2000

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BY

_____
Dr. Craig St. John, Chair

_____
Dr. Loretta Bass

_____
Dr. Ann Beutel

_____
Dr. Thomas Burns

_____
Dr. Joe Rodgers

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ABSTRACT

This study considers the possible increase in the concentration of affluence from 1990 to 2000, as well as factors affecting the concentration of affluence and racial differences in the concentration of affluence. Analyses using U.S. Census data for Metropolitan Statistical Areas for 1990 and 2000 indicated that the rate of concentrated affluence did increase from 1990 to 2000. Using ordinary least squares regression, this study showed that economic and social factors including the change in the proportion of the labor force employed in manufacturing from 1990 to 2000, change in mean household income from 1990 to 2000, and change in the log of affluent households from 1990 to 2000 were all significant in explaining the increase in the concentration of affluence.

With regard to race, the concentration of affluence did increase from 1990 to 2000 for both whites and blacks; however, there were differences in the variables related to this increase. For whites, the variables that were related to an increase in the concentration of affluence from 1990 to 2000 were the same as those for the larger population. However, for blacks region of the U.S. was a determining factor with regard to the increase in the concentration of affluence along with the change in the log of affluent households.

CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

The study of the geographical concentration of members of society by their economic standing has mainly focused on the concentration of poverty. The concentration of poverty may be thought of as the extent to which poor people live in just a subset of neighborhoods occupied mainly by other poor persons (Krivo, Peterson, Rizzo, and Reynolds 1998). One reason that the study of segregation by economic status has mainly focused on the poor is that the social and economic environment of areas that are high in poverty may influence the life course of those who reside there (Jargowsky 1997). The opportunities of the poor may be constrained by the areas in which they reside.

Where group poverty is more prevalent or is increasing, the disadvantaged segments of the community become more geographically isolated from other groups in society (Krivo, et al. 1998). When this geographical isolation occurs the poor of these areas may face what Wilson (1987) termed "concentration effects," where the residents of extreme poverty neighborhoods face a constraint on opportunity. One factor that Wilson (1996) found increased the concentration of poverty is that the middle and working class left inner city areas and left the poor behind. Along with the middle and working class, the work opportunities for the low-skilled population are also leaving (Wilson 1996). Thus, the poor, especially poor blacks are left in areas with a high concentration of poverty and few job opportunities. Rather than focusing on the issue of class, Massey and Denton (1993) instead find that racial segregation

has caused the concentration of poor blacks and theorize that when the poverty rates increased during the 1970s more middle- and upper-class blacks became poor. Massey and Denton (1993) propose that the key to the segregation of poor blacks is discrimination in the housing market. Although they presented different reasons for the concentration of the poor, especially poor blacks, Massey and Denton (1993) and Wilson (1996) concluded that the concentration of poverty has an impact on the life of the poor.

Research has shown that residing in poor neighborhoods can negatively impact life chances in the forms of family structure, educational attainment, employment, and the economic conditions of children (Jargowsky 1997, Wilson 1987, Wilson 1996). Poor families live in neighborhoods with low quality schools, fewer good role models, and constricted job networks (Jencks and Mayer 1990, Lowry 1981). In these poor neighborhoods there is a greater chance of residents being victimized by teenage gangs and a higher incidence of crime and drugs, which can also impact the life choices that residents of these neighborhoods are likely to make (Madrick 1995, Wilson 1987, Wilson 1996, Jencks and Mayer 1990).

Thus, the research on the concentration of poverty has attempted to uncover the disadvantage the poor face as a result of their place of residence. Corcoran (1995) suggested that given the negative impact living in a poor neighborhood has on individuals and families the solution to the concentration of the poor is to enable poor families to buy into better neighborhoods by providing them with more economic resources.

Unlike the concentration of poverty, which is seen as a severe problem that is associated with a host of social troubles, "affluence is rarely viewed as a problem that requires social action" (Shaw 1997:546). This separation of the affluent from other income groups has consequences with regard to social services and increased segregation in our society. Just as the separation of classes can impact areas of life such as family, health, and access to services for the poor who are geographically concentrated, it also has an impact on the affluent who are geographically concentrated.

Research done from 1970 to 1980 showed that there was a growing tendency toward segregation by income, with wealth and poverty becoming increasingly confined to separate residential areas (Massey and Eggers 1993). Wealth and education have allowed people to seek out places where people live who are like themselves (Bishop 2008). If the affluent become more concentrated, other neighborhoods will lose the benefits that the affluent provide to neighborhoods. Also, early research showed that residential segregation is one of the barriers to upward mobility, in that people are more likely to experience upward mobility if they are able to observe and imitate the ways of higher social strata (Duncan and Duncan 1955).

One reason noted for the increasing separation of the affluent from other classes is that there was a decline overall in the share of upper-middle-class families and an increase in the proportion of affluent families (Massey and Eggers 1993). The affluent tend to be concentrated close to cities in counties that are relatively densely populated (Shaw 1997). The affluent also tend to live in the most affluent counties, where affluence is the norm. In 1990, "more than 67% of all US households with

incomes over $75,000 live in the 155 most affluent counties" and " the 50 most affluent counties alone are home to more than one-third of all households in the conterminous US with incomes over $75,000" (Shaw 1997:550). However, since neighborhoods have been shown to impart considerable advantages and disadvantages to the people who live in them, neighborhoods need to be viewed as a source of unequal opportunity (Brooks-Gunn, Duncan, Klebanov, and Sealand 1993). Massey (1996) posited that affluence is even more highly concentrated spatially than poverty, and in order to fully understand economic segregation and its social impact, both sides of the spectrum must be considered.

One result of the separation of classes is that while the poor became less likely to experience residential contact with those outside of their class, so did the affluent (Massey and Eggers 1993). Unlike the poor who may not be able to change their area of residence, affluence allows for the chance to decide where one would like to reside. Speare, Goldstein, and Frey (1974) consider the state of Rhode Island and the intraurban mobility that took place in this state from the 1960s to the 1970s. They concluded that the individual and household characteristics they considered in studying intraurban mobility operate largely through the intervening variable of residential satisfaction. Although this study is not representative of the United States as a whole, it is significant in that it shows how people choose an area in which to live based on factors such as housing characteristics and location. This is particularly important for the study of the concentration of affluence as the affluent, unlike the poor, have the means to undergo intraurban mobility to a greater extent and can move into a neighborhood that provides more residential satisfaction.

Just as the separation of classes can impact areas of life such as family, health, and access to social services for the poor who are geographically concentrated, it also has an impact on the affluent who are geographically concentrated. Place stratification theory argues that places or neighborhoods are "ordered hierarchically and consequently are associated with more or less favorable life chances and quality of life for the people who reside in them" (Alba and Logan 1993:1391). Neighborhood economic and social structure has been found to have an impact on children and adolescent behavior, over and above family resources (Brooks-Gunn et al. 1993).

Browning and Cagney (2003) found that increasing neighborhood affluence is health enhancing, independent of individual demographic characteristics or health background. Members of all minority groups who live in areas characterized by a high household income and homeownership experience lower crime rates than other members of their minority group (Alba, Logan, and Bellair 1994). The affluent can avoid crowding and high taxes, and they can concentrate in areas where they are able to create political power blocs and superior municipal services (Ashton 1977, Baldassare 1992, Massey 1996). Some researchers have found that the flight of middle-class or affluent families to the urban periphery was due in part to concern over the quality of schools and the fear of crime (Jargowsky, 1997). Thus, the affluent have the ability to increase their life chances by congregating in areas that are made up of other affluent families.

Unlike the concentration of poverty, which has a negative impact on individual and family life, the concentration of affluence has the opposite effect. Research has shown that the economic growth of the 1990s affected both the poor and the affluent.

Jargowsky (2003) found that along with the economic growth there was a significant decline in the concentration of poverty. As the poor are trying to leave the impoverished areas to have better life chances, it would seem that the affluent would seek out affluent areas in order to increase their residential benefits. Thus between 1990 and 2000, it is reasonable to expect there would be an increase in the concentration of affluence.

This study will examine the possible increase in the concentration of affluence between 1990 and 2000. The concentration of affluence is considered to have increased if there has been an increase in the percentage of affluent households that are located in affluent neighborhoods. This study will expand on St. John's (2002) study on the concentration of affluence in 1990. The first hypothesis that will be considered is that the concentration of affluence will have increased in the period from 1990 to 2000 due to social and economic changes that have occurred in that same time period. The next hypothesis that will be considered is that the concentration of affluence will have increased more in metropolitan areas with certain changes in their social and economic characteristics between 1990 and 2000. For example, metropolitan areas that experienced the greatest increases in their professional, managerial, and technical employment between 1990 and 2000 will have experienced the greatest increases in the concentration of affluence. With regard to race, I expect to find that the black affluent will not have experienced the increasing concentration of affluence between 1990 and 2000 to the same extent that whites have.

The units of analysis that will be used in this research are the metropolitan statistical areas for 1990 and 2000. As changes in metropolitan boundaries occurred

between 1990 and 2000, I will use a consistent set of boundaries based on the 2000 U.S. Census for my analysis. All data will come from summary file 3 of the 2000 U.S. Census. The analyses will be done using ordinary least squares regression.

The dependent variable in this study will be the change from 1990 to 2000 in the rate of concentrated affluence. Variables will be included in the analysis as control variables as described in St. John (2002). One of these variables is region of the country where MSAs are located. In order to consider the impact that economic changes may have had on the concentration of affluence, measures of changes in type of employment will also be considered. These include: the change in the proportion of the labor force employed in manufacturing from 1990 to 2000 and the change in the proportion of the labor force employed in professional, managerial, and technical occupations from 1990 to 2000, the change in mean household income from 1990 to 2000, and the change in the number of affluent households in an MSA from 1990 to 2000.

Race is also expected to have an impact on the concentration of affluence. Therefore, the index of dissimilarity will be used to measure the amount of residential segregation between blacks and whites as well as between affluent black households and affluent white households. The impact of the change in the rate of segregation between races will also be considered separately for whites and blacks, as racial segregation should contribute to the concentration of affluent whites but should impede the concentration of affluent blacks.

Economic Changes that Led to the Increasing Concentration of Affluence

The concentration of affluence can be described as the grouping of affluent households in a residential location, separated from other income groups. This separation of the affluent from other income groups has consequences with regard to social services, societal institutions, and increased segregation in our society. As the economic restructuring in the US away from manufacturing and toward white collar occupations has continued, it is expected that this will be a factor in the increase in the concentration of affluence through the 1990s.

Research has shown that with globalization there have been changes in the U.S. economy that have increased the number of non-durable goods manufacturing and professional, managerial, and technical positions and have at the same time decreased high-paying manufacturing jobs (Reich 1989, Madrick 1995, Danziger and Gottschalk 1995). With the loss of higher-paying manufacturing jobs and the increase in higher-paying professional, managerial and technical jobs, then it is expected that there has been an increase in the concentration of affluence during this same period. These factors may have a direct impact on the rate of the concentration of affluence, but may also affect the concentration of affluence indirectly through changes in income and income distribution.

General economic development theory states that as economic development progresses "it will bring about a generalization of the market and market relations to an increasing number of institutional spheres in a society" (Sassen 1991:246). The postindustrial transformation of societies indicates that this generalization has included the expansion of a highly educated workforce and the expansion of highly paid

professional-level jobs. Along with the increase in higher paid professional level jobs, there has been a loss of higher paid jobs in manufacturing (Sassen 1991). A more competitive form of manufacturing has replaced traditional forms of mass production, and with this change there has been a sharp reduction of middle-class jobs that do not require a higher education (Madrick 1995). Due to these labor force changes, Sassen (1991:279) suggests there has been an "indirect creation of low-wage jobs" that has been induced by a "polarized income distribution."

Reich (1989), like Sassen (1991), posits that growing inequality between the wealthy and poor in society is due to changes in the structure of the American economy as it merges with the global economy. He finds that the growth in inequality has increased among Americans in the workforce, and posits that the American economy is creating a wider range of earnings now than it had in the past due to the fact that our economy is becoming tied to a global market (Reich 1989). With the merger of the American economy into the global economy, Reich (1989) finds that three broad categories of occupations are emerging: symbolic-analytic services, routine production, and routine personal services. Symbolic-analysts have variable incomes depending on how much value they add to their employer (Reich 1989). Jobs in this category include lawyers, investment bankers, academics, and research scientists; all of whom have traditionally had higher education levels and comparatively higher salaries (Reich 1989). Reich (1989) also notes that their salaries are on the rise as they not only meet a demand here in the United States, but also abroad.

Unlike symbolic-analytic services, routine production is traditionally associated with manufacturing, but can also include jobs that require data processing (Reich 1989). The jobs Reich (1989) includes in this category are repetitive jobs that require little education and are paid with an hourly wage. Although these jobs used to be fairly well-paid, the American employees are now in competition with cheaper labor that can be found abroad. Reich (1989:27) notes that with this foreign competition the "standard of living of America's routine production workers will likely keep declining."

The final category noted by Reich (1989) is routine personal services. Like routine production, these are also hourly wage jobs that require little education; however, unlike routine production they are in direct contact with customers (Reich 1989). Even though most of these jobs do not come in competition with foreign labor, they still have poor pay (Reich 1989). It is important to realize that these three categories are coming to have different competitive positions in the world market.

Like Sassen (1991) and Reich (1989), Morris, Bernhardt, and Handcock (1994) find that the current economy has led to a growth in high skill and low skill jobs with a shrinking group of middle-class workers. They describe two different theories that explain this decline in middle class jobs—job-skill mismatch and polarization theory (Morris, et al. 1994). Job-skill mismatch theorists argue that there is a widening gap between "the high skill requirements of post-industrial jobs and the mediocre education and training that certain groups of workers bring to the labor market" (Morris, et al. 1994:205). However, polarization theorists argue that this shift to a service-based economy has produced two tiers of workers, one high-skill and one low-

skill, and that there are fewer jobs in the middle range (Morris et al. 1994). Unlike job-skill mismatch theorists, polarization theorists see the increases in inequality as relatively permanent and only likely to change if there is more industrial restructuring (Morris et al. 1994). The unemployed now remain out of work longer, and there has been a loss of middle-class production jobs in manufacturing, which has led to a broad decline in social mobility as well as economic opportunity (Madrick 1995).

Danziger and Gottschalk (1995) also examined changes in the labor market in order to explain why the income gap between the rich and the poor has increased. They find that over the last two decades the rich, who they define as the wealthiest fifth of society, saw an increase in income while the poorest fifth of society saw a reduction in income (Danziger and Gottschalk 1995). During this same time period, the income shares of the second and third quintiles, who they call the middle class, were lower than during any other period after WWII (Danziger and Gottschalk 1995). Danzinger and Gottschalk (1995) propose two reasons as to why the middle class experienced declining income from the 1970s through the early 1990s. The first of these is that the introduction of new technologies such as the computer led to the increase in income inequality as it raised the demand for highly skilled workers, while at the same time lowering the wages and demand for lower-skilled workers (Danziger and Gottschalk 1995). Their second explanation for increased income inequality is the "major deindustrialization of the US economy over the past 25 years, which shifted workers out of manufacturing and into the service sector" (Danziger and Gottschalk 1995:112). Danziger and Gottschalk (1995) conclude that the different occupations that have emerged require different skill sets than have been needed before and more

education to obtain these skills. Based on their findings they conclude that increased technology, globalization, decreased unionization, a stagnant minimum wage, and the fluctuation of the supply of and demand for labor have worked to widen the income gap between the poor and the affluent

Madrick (1995) sees the younger and less-educated workers as the losers in this economic shift because of jobs lost due to international competition and more flexible production. For Madrick (1995) the biggest consequence of the loss of traditional mass production jobs due to the growth in technology and globalization has been the loss of the higher paying jobs that required little or no education. He also notes that "the loss of middle-class production jobs in manufacturing spearheaded the broad decline in economic opportunity and social mobility" and mass production jobs that paid well in other sectors of the economy also began to disappear and pay less well (Madrick 1995:136). Krivo, Peterson, Rizzo, and Reynolds (1998) also found that those areas with declining population and manufacturing bases, such as the Northeast and Midwest, are experiencing a greater geographical concentration of disadvantage.

Wilson (1996) discusses how the economy, basically, has left the poor behind. He states that with industrial restructuring and the deindustrialization that has taken place in the inner cities, many businesses have either failed or moved to the suburbs. This leaves the poor concentrated in cities without the skills or the job opportunities to raise their standard of living. Sassen (1991) also finds that jobs have become suburbanized, where low-income residents have been left behind with no way to move to these suburban areas where the jobs are located.

As early as 1955, research found that residential segregation was greater for those occupation groups with clearly defined status, such as professionals and laborers, with occupation being more closely related to residential segregation than any other socioeconomic status indicator (Duncan and Duncan 1955). Therefore, it can be expected that the changes in the American labor market that have led to an increase in both higher wage and lower wage jobs and a declining middle class will have an impact on residential segregation. It seems that with globalization and technology increasing through the 1990s, the poor would continue to lack access to higher paying jobs in the labor market and would thus be separated from the residential areas where those who make higher incomes live. Therefore, the disparity between the poor and the affluent would increase between 1990 and 2000. It is likely that those areas that have had a growth in jobs based on technology would also experience a greater concentration of affluence.

Research Considering the Concentration of Affluence

Although little research has specifically considered the concentration of affluence, there have been some studies that have considered the extent to which affluence is concentrated and the factors that could affect its concentration. Early studies only considered broad regions such as the north and south when studying levels of wealth, poverty, and well-being (Smith 1972). Ashton (1977) looked more specifically at the concentration of affluence; however, he compared all the municipalities of one urban area, Detroit. Ashton (1977:290) hypothesized that in the suburbs people had more control over their social and economic environment, so they

would gather there with people like themselves in order to "build the institutions which tend to reproduce their own particular status characteristics" and "protect and/or expand their competitive advantage over time."

Ashton's (1977) study used 1970 U.S. Census data from 59 incorporated municipalities in the Detroit SMSA that had populations over 2,500. In order to measure the socioeconomic status of suburbs, Ashton (1977) used the percentage of persons aged sixteen and older residing in each municipality who were employed in a white collar occupation. High status suburbs were those where more than 70 percent were employed in white collar occupations, while low status suburbs were those where less than 40 percent were employed in white collar occupations (Ashton 1977). The remaining municipalities were defined as middle-status (Ashton 1977). Using these measures 13 municipalities were high status, 32 were middle status, and 14 were low status (Ashton 1977).

Ashton (1977) also compared municipalities by determining the percentage of the workforce in the competitive sector versus the monopoly sector. According to Ashton (1977:292) the monopoly sector is characterized by higher wages due to "capital intensity, high labor productivity, and high public visibility" while the competitive sector is characterized by low wages and "high labor intensity and low productivity and profit margins." The competitive sector is composed of job categories including: competitive manufacturing, construction, trade, and services, while the monopoly sector is composed of jobs including: monopoly manufacturing, mining, communications, utilities, railroads, business services, and finance (Ashton 1977). Ashton (1977) found that the suburbs that had comparatively greater

employment in the competitive sector contained higher proportions of black workers as well as very young and old workers, who are typically excluded from the primary labor market. On the other hand, Ashton (1977) found that residents of monopoly sector suburbs had a greater degree of privilege, in that the median earnings for some categories were higher when residing in a municipality that is predominantly monopoly sector. Although Ashton (1977) found evidence that workers with similar types of occupations tend to live in similar areas, he does not specifically consider income and whether or not people with similar incomes also tend to live in similar areas.

Massey and Eggers (1993) add to early studies of affluence by not only documenting trends in the distribution of income within different metropolitan areas, but also measuring the degree of segregation by income. In order to consider changes in the concentration of affluence from 1970 to 1980, Massey and Eggers (1993) used US Census data from 1970 and 1980 for the 30 largest metropolitan areas. To define affluence, Massey and Eggers (1993) used four times the poverty level for a family of four, which in 1979 was about $7,500 so the level of affluence they used is $30,000. There are six income categories between their points of poverty and affluence in the data so they consider the bottom three income categories of the six to represent the lower middle class and the top three income categories of the six to represent the upper middle class (Massey and Eggers 1993). To measure income segregation in these metropolitan areas, the index of dissimilarity is used and to measure changes in the concentrations of affluence and poverty the isolation index (P*) is used (Massey and Eggers 1993).

Massey and Eggers (1993) reported some basic trends in their comparison of family income, the first of which is that in about one-third of the SMSAs there was a rise in family income over the decade along with an increase in the number of affluent families and declining income among the poor, lower-middle class, and upper-middle class. Another trend was there was increased bifurcation of the income distribution, which came about due to increases in the number of poor and affluent families and decreases in those considered to be middle class. Along with the bifurcation of income, Massey and Eggers (1993) also found that over the course of the 1970s both poor and affluent families were more likely to reside with those who were of the same class. With regard to the concentration of poverty, Massey and Eggers (1993) found that in 1980 the average poor family lived in a neighborhood where about one-fourth of the families in the neighborhood were poor. The concentration of the affluent increased even more than the concentration of the poor. In 1980, with the exception of Buffalo and Tampa, Massey and Eggers (1993:307) found that the "affluent families lived in census tracts in which at least one-third of families were also affluent."

Massey and Eggers (1993:304) also considered factors that could be related to the degree of residential segregation between classes. In considering the change in the degree of segregation from 1970 to 1980 they find that "although class segregation decreased in some metropolitan areas, in most places it increased substantially" (Massey and Eggers 1993). Both the poor and the affluent were increasingly likely to live in census tracts with people of a similar economic background, with the concentration of affluence becoming greater in all 30 SMSAs (Massey and Eggers 1993). The factors they found that were positively related to the concentration of

affluence included earnings in the manufacturing and service sectors. Massey and Eggers (1993) also found the proportion of affluent families in metropolitan areas is negatively related to the level of unemployment. When considering race, Massey and Eggers (1993) find that rising racial segregation in conjunction with rising class segregation contributed to both the concentration of poverty and affluence.

In his presidential address presented at the annual meeting of the Population Association of America, Massey (1996) revisited the issue of the concentration of affluence and added census data from 1990 to the 1970 and 1980 data used by Massey and Eggers (1993). Massey (1996) found that there was an increase in the concentration of affluence through 1990. In 1970, the average affluent person lived in a neighborhood that was about 39% affluent, with this percentage increasing to 43% in 1980, and then increasing to 52% in 1990 (Massey 1996). Massey (1996) finds that affluence is even more spatially concentrated than poverty. Interestingly, the increases in the concentration of poverty that are seen from the 1970s to the 1990s are "caused by racial rather than class segregation" (Massey 1996:404).

Like Massey (1996), Coulton, Chow, Wang, and Su (1996) also considered the concentration of poverty and affluence through the 1990 decennial census. Included in their study were the 100 largest MSAs in the United States, with their data coming from the 1990 Census. However, the measure of affluence used by Coulton et al. (1996) is approximately two times the median—about $75,000—rather than four times the poverty rate. Thus, their threshold is higher than that used in other studies and "represents approximately the top 12% of the family-income distribution," which they feel is more representative with how the public views affluence (Coulton et al.

1996:192). In order to measure the concentration of affluence they use: the C index, which is defined as the proportion of affluent families living in census tracts where 40% or more of families were affluent, the D index to measure the segregation of the affluent from the nonaffluent, and the P* index to measure the isolation of the affluent from the nonaffluent (Coulton et al. 1996).

For their descriptive study, Coulton et al. (1996) divide the MSAs by clusters. They cluster MSAs that are similar in regard to the geographic concentration of poverty and affluence and then look for differences and similarities in the clusters with regard to "racial and ethnic distribution, income distribution, and central city-suburban advantage" (Coulton et al 1996:203). Cluster 1 is made up of cities that have high concentrations of poverty and affluence. They find that Cluster 1 is relatively small and is mainly cities that are older and industrial with large poor populations in the central city. The MSAs in this cluster are also characterized by the highest racial/ethnic segregation out of all the clusters. Cluster 2 contains areas that have low concentrations of poverty and affluence, with most of the cities in this cluster being in the South and West. Cluster 3 contains MSAs that have low concentrations of poverty and a moderate/high concentration of affluence. Cluster 4 contains areas with moderate concentrations of poverty and low concentrations of affluence. The cities in this cluster have little racial and ethnic segregation. Both Clusters 3 and 4 were diverse in regard to what type of MSAs they included. Cluster 5 includes areas that have the lowest concentrations of poverty and the highest concentrations of affluence. Like Cluster 1, this is a small cluster with most of its MSAs being in California and New Jersey. These central cities are "well off in comparison to the suburbs, and there

is a relatively low racial/ethnic segregation in the metropolitan area" (Coulton et al. 1996:207).

Using 1990 U.S. census block data for MSAs, St. John (2002) considered the concentration of affluence in 1990. St. John (2002) considered an affluent neighborhood as a census block group that had a median household income of at least four times the poverty rate for a family of four, which is about $50,696. By focusing on median income, a block group is only defined as affluent if at least half its households have an income that is equal to or above $50,696 (St. John 2002). St. John adjusted this income level for each MSA to take into account differences in the cost of living. Affluent households are defined as those whose household income is at least four times the poverty rate in 1989. He then measured the concentration of affluence as "the percentage of affluent households in an MSA that live in affluent neighborhoods" (St. John 2002:504).

As other studies have also shown (Massey and Eggers 1993), factors that St. John (2002) found to be positively related to the concentration of affluence include the mean household income and the level of income inequality. St. John (2002) also found that the more affluent households there are in an MSA then the higher the rate of concentrated affluence there is in that MSA.

St. John (2002) also considered employment characteristics and race. St. John (2002) found that employment characteristics had an effect on the rate of concentrated affluence. Non-durable goods manufacturing had a positive effect on the rate of concentrated affluence (St. John 2002). Employment in professional, managerial, and technical occupations also had a positive effect on the concentration of affluence (St.

John 2002). Employment characteristics were also shown to have positive effects on mean household income, which means that not only do employment characteristics have a positive direct effect on the concentration of affluence, but they also have an indirect effect. With regard to race, St. John (2002:513) examined the rate of concentrated affluence separately for whites and blacks and found that the "more whites are segregated from blacks, the greater the likelihood affluent white households live in affluent neighborhoods."

Dwyer (2003) used tract level and metropolitan level U.S. census data from 1980, 1990, and 2000 to measure the change in the concentration of affluence over these three decades. Rather than using four times the poverty rate to define affluence, Dwyer (2003) instead considered the top 20 to 25% of households in the income distribution to be affluent, which are those who have a household income of $75,000 or more in 2000. In considering the concentration of affluence in MSAs, Dwyer (2003) used several measures set forth by Massey and Denton (1988). These measures include the dissimilarity index and measures of the isolation and concentration of a group, which Dwyer (2003:225) identifies as measures of the "degree to which one group is separated from others." For the rate of concentrated affluence, Dwyer (2003) borrows from St. John (2002) in defining affluent tracts as those where 50% of the households in the tract are affluent.

Dwyer (2003) found that affluence is substantially more concentrated in 1990 and 2000 than in 1980. She also found that the increase in the number of new homes and the increasing affluence of house buyers contributed to the concentration of affluence. Metropolitan areas that had a greater percentage of poor households also

have an increased rate of concentrated affluence, which indicates that in areas where there are a large number of poor households the affluent are more likely to separate themselves (Dwyer 2003).

In a later study, Dwyer (2007) added to her 2003 study finding that households living in census tracts dominated by new housing saw an increase in median household income by almost 40% from 1980 to 2000. There was also an increasing percentage of affluent households in new as compared to old tracts (Dwyer 2007). The concentration of affluence was higher in 1990 and 2000 than in 1980 and Dwyer (2007:39) found that this is due in part to the fact that "metropolitan areas with greater percentages of new tracts had higher concentrated affluence, demonstrating the significance of concentrated housing development to affluent segregation."

Rather than considering the 1980s through the 1990s, Fischer, Stockmayer, Stiles, and Hout (2004) trace residential segregation over four decades, from 1960 to 2000. The data they used come from census tract statistics for MSAs; however, they would like to treat metropolitan Americans, not the tracts or MSAs, as the universe of interest. In order to do this they look at racial segregation in terms of social dimensions such as race, income, and family status as well as in terms of geographic levels including region, metropolis, central city/suburb, and tract.

With regard to affluence, Fisher et al. (2004) examined the segregation of the wealthiest quintile from the poorest quintile and found that segregation between these two groups increased from 1960 to 2000, especially in metropolitan and suburban areas. They also found that the "total segregation of Americans in the top quintile of household income from other Americans increased from 1970 to 1990…and then

leveled out in the 1990s" (Fisher et al. 2004:49). They proposed that the leveling out in the 1990s is consistent with findings of the abating of income inequality during that decade. With regard to geographical location, Fisher et al. (2004) found that the increase in the segregation of the affluent occurred largely between metropolitan areas and between places within center cities and suburbs. In the decades since 1970, Fisher et al. (2004) found trends that suggested that affluent Americans have used suburban communities as a way to separate themselves from other classes.

Booza, Cutsinger, and Galster (2006) considered the location of low-, middle-, and high-income families and increases and decreases in low-, middle-, and high-income residential areas from 1970 to 2000. They considered the idea that middle-income neighborhoods have been replaced by low-income and very high-income neighborhoods. Booza et al. (2006) hypothesized that this decline in middle-income neighborhoods is due to a decrease in the number of metropolitan families earning middle incomes along with a decline in middle-income neighborhoods as a proportion of all neighborhoods. Their data come from the 100 largest US census tracts according to the 2000 Census and the suburbs of 12 selected MSAs (Booza et al. 2006).

Booza et al. (2006) defined two categories of high-income families for their analysis using a more relative definition of affluence compared to those used in previous studies, which tended to use a more absolute definition of affluence. The "high-income" category includes those households earning 120% to 150% of the area median income (AMI), while the "very high-income" includes those households earning over 150% of the AMI (Booza et al. 2006). Along with these categories,

Booza et al. (2006) also had categories including: high-moderate-income families, which includes families earning 100% to 120% of the AMI; moderate-income families, which includes families earning 80% to 100% of AMI; low-income families, which includes families earning 50% to 80% of AMI; and very low-income families, which includes families earning 50% or less of AMI. Booza et al. (2006) found that the share of families in the very high-income category increased the most between 1970 and 2000 and at the same time there was also a sizable increase in the very low-income category. Along with these shifts they also found that there was a decrease in the middle- and high-middle-income categories. They see a corresponding reaction in neighborhoods, with a loss of neighborhoods defined as middle-income and high-middle-income and a rise in those defined as very low-income and very high-income (Booza et al. 2006). Booza et al. (2006) concluded that families at either end of the distribution became more likely to occupy homogeneous neighborhoods in 2000 as compared to 1970.

Although they are not considering change in the concentration of affluence over time, Lee and Marlay (2007) identified several characteristics of affluent neighborhoods using 2000 US Census tract level data. Lee and Marlay (2007) defined affluent households as those in the top of the income distribution—the highest 2 percent. Limiting their study to the 100 most populous MSAs, they found that affluent neighborhoods are disproportionately white and have higher levels of professional employment (Lee and Marlay 2007). However, unlike some past studies, they found that affluent neighborhoods are spread across all regions and are becoming concentrated in suburban areas surrounding large metropolitan areas (Lee and Marlay

2007). The region with the largest percentage of affluent neighborhoods is the West, with the Midwest having the smallest (Lee and Marlay 2007). Lee and Marley (2007:775) found that for the country as a whole "almost 80 percent of affluent tracts are located in the suburban ring…leaving slightly over 20 percent in central cities." With regard to labor force participation, they found that the rates are similar to those in lower income neighborhoods, except the rates for women, which are actually lower (Lee and Marlay 2007).

Race and the Concentration of Affluence

Racial segregation is another factor that has led to the focus on the concentration of the poor. Whether the research is focused on out-migration of the upper and middle classes of whites and minorities out of poor areas (Jargowsky 1997 and Wilson 1987) or an increase in the number of segregated minority families that fall into poverty (Massey and Denton 1993), the conclusion remains that those concentrated in impoverished areas are more likely to be minorities, especially African-Americans. Krivo et al. (1998) found that between 1980 and 1990 African Americans had a substantially higher concentration of disadvantage than whites. One reason for this is that poverty is most concentrated in cities that are also racially segregated (Massey 1996).

Other research has found that during the 1970s, blacks generally experienced rising poverty, increasing income inequality, and a growing concentration of poverty that was greater than that experienced by whites or Asians at this same time (Massey and Eggers 1993). Massey and Eggers (1993) found that the rising black income

inequality was due less to the geographical concentration of poverty and more to the increasing concentration of affluence. Although this segregation by affluence does disadvantage blacks, it is advantageous for whites as it geographically buffers them from much higher levels of black disadvantage (Peterson and Krivo 1999).

Although household income has a positive effect on the probability of suburban residence, the income differential between the suburban areas and the central city negatively affects the suburbanization of members of racial/ethnic minority groups (Alba and Logan 1991). Spatial assimilation theory argues that individuals attempt to convert their socioeconomic resources into a desired residential location (Massey and Mullen 1984). However, this theory does not assume that housing choices and the housing market are subject only to economic constraints, but also to some that are institutional and political (Gross and Massey 1991). This is especially important in considering where different racial and ethnic groups tend to reside. Whereas whites live in census tracts with the highest average income and the highest proportion of white residents, Logan, Alba, McNulty, and Fisher (1996) found that black homeowners live in tracts with lower white percentages and lower average income. This indicates that black homeowners are most likely to be able to buy homes in black neighborhoods. Thus, even when blacks are homeowners they may not live in the most affluent neighborhoods with whites and may not experience all the advantages of living in a tract with a concentration of affluence.

As compared to similar whites, blacks who do move to the suburbs tend to reside in communities that have higher minority proportions and lower household incomes (Alba and Logan 1993, Massey and Denton 1987). That blacks may have

low residential proximity to whites in some areas is determined mainly by race, rather than by other individual characteristics (Alba and Logan 1993). The degree of segregation between whites and blacks has decreased since the early 1980s through both the central city and the suburban areas (Madrick 1995). Although these research findings suggest that if the concentration of affluence increased from 1990 to 2000 so would the number of black households in affluent areas, it does not mean that the number of black households in affluent areas will be proportionate to any economic gains made by black households during this time period. Affluent blacks should be less likely to live in affluent neighborhoods than affluent whites because racial segregation should limit black access to affluent areas.

One reason that there may not be as many minorities in areas that have a concentration of affluence is that when neighborhoods do upgrade, they have been found to follow race-specific patterns. Upgrading white neighborhoods tend to follow along the path of a "gentrifying yuppie neighborhood," whereas an emerging black middle-class neighborhood tends to be more consistent with a "stable middle-class area" (Morenoff and Tienda 1997:71). This implies that whites may seek out more affluent neighborhoods, whereas blacks would continue to reside in more middle-class surroundings. By 1980 one in every nine black families was affluent, which is four times the number that were affluent in 1940, but blacks are still disproportionately absent from affluent neighborhoods (Smith 1988). This suggests that even if a higher rate of black families was affluent from 1990 to 2000, this may not result in many affluent black families living in affluent areas. Affluent blacks may not choose to reside in or have access to predominately white affluent neighborhoods.

Analyzing the movement of poor and non-poor people into neighborhoods, Massey, Gross, and Shibuya (1994) found that the geographic concentration of poor African-Americans is not caused by out-migration as proposed by Wilson (1987), but is instead due to the residential segregation of African Americans. Alba and Logan (1995) also found support for the segregation of blacks having an effect on black locational attainment. They hypothesized that blacks pay a "locational price for segregation, living in suburbs of lesser status than would be expected on the basis of their own economic standing" (Alba and Logan 1995:361). However, St. John (2002) found that the disparity in income between blacks and whites was more significant in explaining the lower rate of blacks living in affluent neighborhoods than residential segregation. This suggests that if black household income did experience an increase from 1990 to 2000, then there should be a higher proportion of blacks residing in affluent areas, even if not as high as for whites.

Due to the spatial segregation of whites and blacks, blacks may be more likely to experience negative effects due to living in impoverished areas. Krivo and Peterson (2000) found that racial differences in homicide are due in a large part to concentrated disadvantage and residential instability, which is measured by the percentage of homeowners in the neighborhood. This indicates that because blacks are disproportionately concentrated in impoverished areas, they may also be disproportionately suffering the ill effects of living in an impoverished area. This is not true for all racial minority groups as Logan et al. (1996) found that assimilation theory is more appropriate for explaining the residential patterns of Asian and Hispanics, which means that they are more likely to live in a white area. However,

segregation was found to be greatest for blacks, and black residential patterns were better explained by racial stratification theory (i.e. race is more salient than class or income).

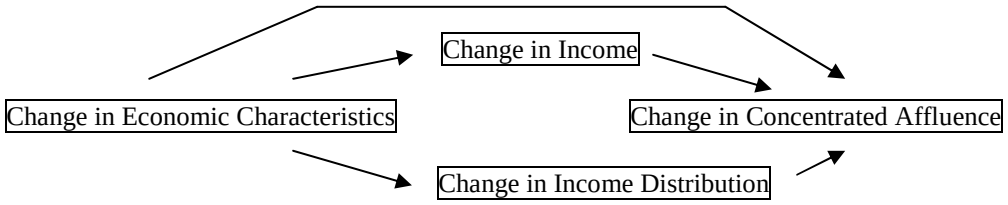
However, Logan et al. (1996) did find that higher income and education of individuals result in higher residential exposure to whites for all minority groups. Massey and Fong (1990) also found that blacks experience a disadvantage in their ability to convert income into residential outcomes, and found that it is only at high educational levels that blacks achieve neighborhood social environments that are indistinguishable from those of other groups. As central city economies have moved from manufacturing to a service base, education has become increasingly important. Kasarda (1995) found that education has increasingly become a prime determinant of blacks' class position as well as their geographical location. When considering who lives in affluent suburbs, Logan and Alba (1995) found that higher income and education are among the main prerequisites to living in higher status suburbs. This finding is true for almost every group as well as for every metropolitan region. However, even if minorities do want to live in neighborhoods that are predominately white, Logan et al (1996) found that whites want to preserve their social position, which may extend to their residential preferences.

As race has been found to affect residential distribution, then it would also seem that different races may not experience the concentration of affluence in a similar way. Based on previous research, it is expected that affluent blacks will be less likely to live in areas of concentrated affluence than affluent whites. Thus, not only should the variables that affect the overall level of concentrated affluence impact

the concentration of affluence for blacks, but also the level of segregation between whites and blacks also should play an important part in the concentration of affluence for blacks.

Hypotheses

1) The concentration of affluence will have increased in the period from 1990 to 2000. Social and economic changes will have occurred between 1990 and 2000 that will result in more concentrated affluence.
2) The concentration of affluence will have increased more in metropolitan areas with certain changes in their social and economic characteristics between 1990 and 2000. For example, metropolitan areas that experienced the greatest increases in their professional, managerial, technical employment between 1990 and 2000 will have experienced the greatest increases in the concentration of affluence. It may be that these social and economic characteristics will directly affect the concentration of affluence or they may indirectly affect the concentration of affluence through changes in income and income distribution.



3) With regard to race, I expect to find that the black affluent will not have experienced the increasing concentration of affluence between 1990 and 2000 to the same extent that whites have.

CHAPTER II

METHODS AND MATERIALS

Following St. John's (2002) study of the concentration of affluence the units of analysis in this research are the metropolitan statistical areas for 1990 and 2000. An MSA is defined by the U.S. Census (2000) as "a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. Each metropolitan statistical area must have at least one urbanized area of 50,000 or more inhabitants." The outlying counties are also included in the MSA if they meet the Census Bureau's requirements for commuting ties to and from the central counties. Primary MSAs are used when the MSAs are consolidated. As changes in metropolitan boundaries occurred between 1990 and 2000, I will use a consistent set of boundaries based on the 2000 Census for my analysis. All data came from summary file three of the 2000 census. The analyses will be done using ordinary least squares regression.

Dependent Variable

The dependent variable in this study will be the change from 1990 to 2000 in the rate of concentrated affluence, which will be measured as the "percentage of affluent households in an MSA that live in affluent neighborhoods" (St. John 2002:504). An affluent household will be defined as one in which the household income is at least four times the poverty rate for a family of four. An affluent

neighborhood will be defined as a census tract with a median household income that is at least four times the poverty rate for a family of four.

Although other researchers have used specific income cutoffs such as $75,000 to measure affluence (Coulton, Chow, Wang and Su 1996), taking four times the poverty rate as a measure has been seen in past research (Smith 1988, St. John 2002) as an appropriate measure for when income goes beyond fulfilling needs, which would be affluence. In 1989, the Census Bureau (1990) identified the poverty threshold for a four-person household as $12,674, with affluence then being $50,696 (or four times $12,674). In 1999, the Census Bureau (2000) identified the poverty threshold for a four-person household as $17,029, with affluence then being $68,116 (or four times $17,029). As the median household income is used, a tract will then be characterized as affluent when at least half of its households are affluent (St. John 2002).

The definitions of affluence will be adjusted for MSA differences in the cost of living in both 1989 and 1999 using data provided by the American Chamber of Commerce Researchers Association (ACCRA). Fourth-quarter data were used for both 1989 and 1999, as that is what went into the U.S. Statistical Abstract (ACCRA 1989, ACCRA 1999). The ACCRA Cost of Living Index was multiplied by four times the poverty rate for the year to get the definition of affluent households for each MSA. For those MSAs where there were no ACCRA data, a regression equation was used to predict ACCRA scores. First, a data set was created for those MSAs with an ACCRA score including the cost of living factor plus other variables that could be related to the cost of living such as: MSA population, region of the country, and MSA mean household income. Then the values of these variables for MSAs with no

ACCRA data were put into the resulting equation to predict their ACCRA cost-of-living index.

In order to calculate the rates of concentrated affluence for MSAs, I will follow the procedure set forth in St. John (2002). First, the number of affluent households that are in each neighborhood of an MSA must be calculated. Second, the number of affluent households that are in affluent neighborhoods must be calculated. Next, the rate of concentrated affluence must be obtained. This process is set forth in St. John (2002:505) and is as follows:

> The number of affluent households in an MSA in affluent neighborhoods is obtained by summing over all affluent neighborhoods, and the total number of affluent households in an MSA is obtained by summing over all neighborhoods. The rate of concentrated affluence is obtained by dividing the former by the later and then multiplying by 100.

The formula for the rate of the concentration of affluence is as follows:

$$\text{Rate of Concentration of Affluence} = \frac{\text{number of affluent households in affluent neighborhoods}}{\text{number of affluent households in an MSA}} \times 100$$

The first step in the calculation is to identify the number of affluent households in each neighborhood then sum over all neighborhoods in an MSA, the sum of which is the denominator of the rate. In order to calculate the number of affluent households in a census tract, it was first assumed that households were spread evenly through the income category containing the cutoff for affluent households. Then, for each MSA it was determined which income category the cutoff rate fell into and how far into the income category the cutoff went. For example, if an MSA has a cutoff of $64, 574 in 2000, this is about 30% of the way into the income category $60,000 to $74,999. Thus, it is assumed that 70% of households in this category are affluent. This 70% of

households is then added to all households in higher income categories to get the total number of affluent households in each tract. I sum the total number of affluent households over all tracts in an MSA to get the total number of affluent households in the MSA. This is the denominator.

Then, I sum the number of affluent households over all the affluent neighborhoods in the MSA, providing the numerator. A neighborhood is considered to be affluent if at least half the households in the tract are affluent. Finally, I will divide the numerator by the denominator and multiply by 100, which is then the rate of concentrated affluence. This is the percentage of affluent households in an MSA that reside in affluent neighborhoods.

The rate of concentrated affluence will be calculated for both 1990 and 2000. The change in the rate of the concentrated affluence over this decade will be the dependent variable.

The shortcomings of using this method of calculating the rate of concentrated affluence are set forth in St. John's (2002) study. One such shortcoming is the fact that the level of analysis used by St. John (2002) is block groups, which could contain only a small number of households when the data analyzed are from a sample. However, this study will instead use data from census tracts, which typically cover several census block groups and contain more residents (Lee and Marley 2007). The next shortcoming is the use of the four times the poverty rate in 1989 and 1999 in order to determine the cutoff for affluence; $50,696 as the affluence cutoff for 1990 and $68,116 for 2000 cannot be considered exact measures of affluence. However, as

the cutoffs are used consistently for all MSAs, they should be valid to study differences between MSAs (St. John 2002).

The last shortcoming listed by St. John (2002) is the fact that household size cannot be considered in determining affluence, as census data are not cross-listed by household size and household income. However, household income has been found to be a useful measure in that households, regardless of "size or relationships among members function as basic earning and consumption units" (Lee and Marlay 2007:771). I will assume any error created by this household affluence measure is distributed equally across MSAs.

Independent Variables

The independent variables considered in this study follow those used by St. John (2002).

Control variables. Variables will be included in the analysis as control variables as described in St. John (2002). One of these variables is region of the country where MSAs are located. These regions are measured using dummy variables for the West, Midwest, and South with the Northeast being the comparison group. Regions were determined using the US Census and Divisions map (U.S. Census Bureau). For those MSAs that fell into two different regions, it was categorized by the region that held the greatest number of census tracts. These regional variables are included to control for regional differences with regard to housing development. Some areas may have developed before economically homogenous suburbs began to be built. By controlling

for region, this takes into account Dwyer's (2003) findings that the development of affluent suburbs has an effect on the concentration of affluence.

Economic Structure Variables. In order to consider the impact that continuing changes in our economy may have had on the rate of concentrated affluence between 1990 and 2000, the following measures will be used: the change in the proportion of the labor force employed in manufacturing from 1990 to 2000 and the change in the proportion of the labor force employed in professional, managerial, and technical occupations from 1990 to 2000. These variables will be based on occupation and industry data for the civilian labor force age, 16 and older. The information for these variables for the 1990 MSA data come from the U.S. Census table DP-3: Labor Force Status and Employment Characteristics. This table includes the number of employed civilians in the labor force, age 16 and older as well as the number employed in executive, administrative, and managerial occupations; professional, specialty technicians, and related support occupations; and durable goods and non-durable goods manufacturing. The percentage of the civilian labor force, age 16 and older, is calculated using the numbers provided in this table. For 2000, the U.S. Census table used is DP-3: Profile of Selected Economic Characteristics: 2000. This table includes the percentage of the civilian labor force, age 16 and older employed in management, professional, and related occupations and in manufacturing. Although St. John (2002) considered the manufacturing of durable and nondurable goods separately, these data were combined for the 2000 census.

The change in mean household income from 1990 to 2000 will be considered. Following St. John (2002), mean household income will be calculated by dividing total household income in an MSA by the number of households in the MSA. The change in income distribution around the average level of income will be considered using the change of the Gini concentration ratio from 1990 to 2000. The Gini concentration ratio is used to measure the degree of inequality. The Gini ranges from 0.0 to 1.0, with 0.0 representing a perfectly even distribution of income among all households and 1.0 representing maximum inequality, or one household having all the income (Siegel and Swanson 2004).

The index of dissimilarity will also be used to measure the overall level of residential segregation between affluent and nonaffluent households. These variables will be measured as the change in the level of segregation between 1990 and 2000. The index of dissimilarity calculates the segregation that exists between groups and ranges from 0 to 100, where 0 is no segregation and 100 is complete segregation (Massey and Denton 1998).

Another economic variable that will be included is the change in the number of affluent households in an MSA from 1990 to 2000. The change in the number of affluent households in an MSA must be included because the number of affluent households affects whether or not affluent neighborhoods may be formed (St. John 2002). In other words, if there is an increase in the number of affluent households between 1990 and 2000 in an MSA, then the greater the increase in the concentration of affluence that is expected. As the total number of affluent households is highly skewed, with some MSAs having a large number and some only having a few, I

calculated the base 10 logs of the 1990 and 2000 number of affluent households and then took the difference.

Race. In order to see if the factors that lead to the concentration of affluence are the same for whites as they are for blacks, the impact of the change in the rate of segregation between races will be considered separately for whites and blacks, as racial segregation should contribute to the concentration of affluent whites but should impede the concentration of affluent blacks. When race is considered, the dependent variable is the change in the rate of concentrated affluence for blacks between 1990 and 2000 or whites between 1990 and 2000.

In order to consider changes in the rate of concentrated affluence by race, the rate of concentrated affluence will be calculated separately for non-Hispanic whites and blacks, in addition to the total population. For whites and blacks, the concentration of affluence was calculated first by using the same procedures as were used for the MSAs overall in order to find the number of affluent households in each census tract; however, the total number of affluent households in affluent census tracts was found by totaling affluent households in census tracts that were found to be affluent in the calculation for the MSA overall. For whites in 1990, there was no separate category for non-Hispanic whites so the "Other" category for race, which was found to consist mainly of Hispanic households, was subtracted from the "White" income categories in order to have a "White" income category that was non-Hispanic (St. John 2002).

The index of dissimilarity will be used to measure the amount of residential segregation between blacks and whites as well as between affluent black households

and affluent white households. The analysis for blacks was restricted to MSAs with a black population of at least 10,000 (St. John 2002).

Methods

I will use ordinary least squares regression analysis to examine a series of equations predicting change in the rate of concentrated affluence between 1990 and 2000.

1) $chgconaff = a + b_1 conaff1990 + b_2 region$
2) $chgconaff = a + b_1 conaff1990 + b_2 region + b_3 chgmanufacturing + b_4 chgmanagerial$
3) $chgconaff = a + b_1 conaff1990 + b_2 region + b_3 chgmanufacturing + b_4 chgmanagerial + b_5 chgmeanhouseholdincome + b_6 chggini$
4) $chgconaff = a + b_1 conaff1990 + b_2 region + b_3 chgmanufacturing + b_4 chgmanagerial + b_5 chgmeanhouseholdincome + b_6 chggini + b_7 chgaffluenthouseholds$
5) $chgconaff = a + b_1 conaff1990 + b_2 region + b_3 chgmanufacturing + b_4 chgmanagerial + b_5 chgmeanhouseholdincome + b_6 chggini + b_7 chgaffluenthouseholds + b_8 chgeconomicsegregation$
6) $chgconaff = a + b_1 conaff1990 + b_2 region + b_3 chgmanufacturing + b_4 chgmanagerial + b_5 chgmeanhouseholdincome + b_6 chggini + b_7 chgaffluenthouseholds + b_8 chgeconomicsegregation + b_9 chgracialsegregation$

In equation 1 the independent variables are the rate of concentrated affluence in 1990 and region. I include the 1990 rate of concentrated affluence in equation 1 to control for the fact that MSAs already with high rates of concentrated affluence in 1990 will have less room for change between 1990 and 2000. Region takes into account possible differences in urban structure among MSAs in different regions.

In equation 2 I add variables measuring change in employment in managerial, professional, and technical occupations and change in manufacturing employment. This equation will demonstrate the extent to which changes in an MSA's employment base are related to change in the concentration of affluence.

In equation 3 I add variables measuring the change in mean household incomes in MSAs and the Gini coefficient for household income. This variable will measure the extent to which changes in household income and change in income distribution around the average level of income is related to change in the concentration of affluence.

In equation 4 a variable to measure the change in the log of affluent households is added. This variable is included to measure the extent to which changes in the amount of affluent households is related to change in the concentration of affluence.

In equation 5 a variable measuring the index of dissimilarity will be used to measure the overall level of residential segregation between affluent and nonaffluent households. This variable will measure the extent to which the segregation that exists between affluent and nonaffluent households is related to the change in the concentration of affluence.

In equation 6 a variable measuring the index of dissimilarity will be used to measure the overall level of residential segregation between white and black households. This variable will measure the extent to which the segregation that exists between white and black households is related to the change in the concentration of affluence.

These equations will differ for predicting change in the rate of concentrated affluence between 1990 and 2000 for whites and blacks with regard to the dependent variable in equation 1. For whites, the dependent variable will be the change in the rate of concentrated affluence from 1990 to 2000 for whites. In equation 1 instead of the rate of concentrated affluence in 1990, this variable will instead be the rate of concentrated affluence in 1990 for whites. For blacks, the dependent variable will be change in the rate of concentrated affluence from 1990 to 2000 for blacks. In equation 1, instead of the rate of concentrated affluence in 1990, this variable will instead be the rate of concentrated affluence in 1990 for blacks.

CHAPTER III

RESULTS

Levels of Concentrated Affluence

I begin with descriptive statistics of the levels of concentrated affluence. Table 1 affords an overall look at the MSAs with the highest rates of concentrated affluence in 1990 and 2000. It is interesting to note that 9 of the 20 MSAs with the highest rates of concentrated affluence are the same between 1990 and 2000 and Stamford-Norwalk, CT has the highest rate for both time periods.

[Table 1 here]

The first panel of Table 1 presents the 20 MSAs with the highest rate of concentrated affluence in 1990. The average rate of concentrated affluence for these MSAs is 31.31, with an average of 150,522 affluent households, and an average household income of $47, 377. Comparatively, the average rate of concentrated affluence over all MSAs in 1990 was only 7.79, with an average of only 48,908 affluent households, and an average household income of $36, 296. Not all MSAs had affluent census tracts in 1990. There were 120 MSAs that had no affluent census tracts, and therefore a 0.00 rate of concentrated affluence (see Appendix 1). These MSAs had an average household income of $31,721 and an average of only 10,299 affluent households. There was not much difference in the average Gini coefficient between the MSAs with highest levels of concentration (0.44) and those with the lowest (0.43).

Table 1. Metropolitan Statistical Areas with the Highest Rates of Concentrated Affluence in 1990 and 2000

1990	
MSA	*Rate*
Stamford--Norwalk, CT PMSA	53.61
Boulder--Longmont, CO PMSA	37.99
Oakland, CA PMSA	36.57
Washington, DC--MD--VA--WV PMSA	35.02
Newark, NJ PMSA	34.49
Honolulu, HI MSA	34.17
Tallahassee, FL MSA	33.99
Abilene, TX MSA	33.29
Houston, TX PMSA	31.96
Albany, GA MSA	31.54
Huntsville, AL MSA	29.97
Dallas, TX PMSA	28.46
Memphis, TN--AR--MS MSA	26.88
Denver, CO PMSA	26.76
Lawrence, MA--NH PMSA	25.94
San Jose, CA PMSA	25.69
Detroit, MI PMSA	25.42
Orange County, CA PMSA	24.89
Bergen--Passaic, NJ PMSA	24.87
Atlanta, GA MSA	24.59
Average for highest 20 MSAs	**31.31**
Average for all MSAs	**7.79**

NOTE: MSA=Metropolitan Statistical Area
PMSA=Primary Metropolitan Statistical Area

Table 1. Metropolitan Statistical Areas with the Highest Rates of Concentrated Affluence in 1990 and 2000 (continued)

	2000
MSA	*Rate*
Stamford--Norwalk, CT PMSA	57.31
Danbury, CT PMSA	51.85
San Jose, CA PMSA	48.17
Baltimore, MD PMSA	44.40
Oakland, CA PMSA	40.86
Ann Arbor, MI PMSA	40.36
Houston, TX PMSA	40.18
Dallas, TX PMSA	39.74
Ventura, CA PMSA	39.49
Newark, NJ PMSA	37.75
Trenton, NJ PMSA	37.00
Austin--San Marcos, TX MSA	36.82
Atlanta, GA MSA	36.59
Denver, CO PMSA	35.57
Hamilton--Middletown, OH PMSA	35.51
Colorado Springs, CO MSA	35.22
Middlesex--Somerset--Hunterdon, NJ PMSA	35.02
Boulder--Longmont, CO PMSA	33.74
Phoenix--Mesa, AZ MSA	32.52
San Antonio, TX MSA	32.49
Average for highest 20 MSAs	**39.53**
Average for all MSAs	**11.28**

NOTE: MSA=Metropolitan Statistical Area
PMSA=Primary Metropolitan Statistical Area

The second panel of Table 1 presents the 20 MSAs with the highest rates of concentrated affluence in 2000. The average rate of concentrated affluence for these MSAs is 39.53, with an average of 272,620 affluent households, and an average household income of $70,880. In comparing these numbers to those of the MSAs with the highest rates of concentrated affluence in 1990, there has been an increase in all three aspects.

The average rate of concentrated affluence over all MSAs in 2000 was 11.28, with an average of 71,202 affluent households, and an average household income of $52,927. As was the case in 1990, not all MSAs had affluent census tracts in 2000. There were 102 MSAs that had no affluent census tracts, and therefore a 0.00 rate of concentrated affluence (see Appendix 1). These MSAs had an average household income of $46,292 and an average of only 12,607 affluent households. The average Gini coefficient for the MSAs with both the highest and lowest levels of concentrated affluence was 0.44, which indicates that level of income inequality is the same across MSAs with different levels of concentrated affluence.

Table 2 presents the MSAs with the greatest positive and negative changes in the rate of concentrated affluence. Panel one of Table 2 lists the 20 MSAs that had the greatest positive increase in the rate of concentrated affluence from 1990 to 2000. These MSAs had an average rate of concentration of 11.41 in 1990, as compared to an average rate of 31.08 in 2000 with the overall average rate of change being 19.67. The average household income of these MSAs in 1990 was $43,348, which increased to $61,942 in 2000. There was also an increase in the average number of affluent households in these MSAs from 49,763 in 1990 to 157,493 in 2000.

[Table 2 here]

The MSAs with the greatest positive change are fairly evenly spread among the different regions; however, there are some similarities with regard to total population growth and growth of the affluent population. Out of the total MSAs, 6 of the MSAs with the greatest positive increase in the rate of concentrated affluence are among the top 45 MSAs that had the greatest total population growth between 1990 and 2000. Six MSAs are in the top 25 MSAs with the greatest increases in affluent population between 1990 and 2000.

Panel two of Table 2 shows the 20 MSAs with the greatest decrease in the rate of concentrated affluence between 1990 and 2000. Although the average household income between 1990 and 2000 increased from $34,402 to $49,717, the average number of affluent households in these MSAs declined from 56,293 in 1990 to 38,596 in 2000. Unlike the MSAs with the greatest positive change in the rate of concentrated affluence from 1990 to 2000, there were no striking similarities with regard to population growth. Seven of them are in the top 55 MSAs with the least (or negative) change in affluent households between 1990 and 2000, with 12 in the top 100. Although region did not seem to be a factor in which MSAs had the greatest positive change in the rate of concentrated affluence, 11 of the MSAs with the greatest negative change were located in the south.

Table 3 presents the means and standard deviations for all the variables used in the analysis. As expected, the rate of concentrated affluence increased from 1990 to 2000, from a mean of 7.79 to a mean of 11.28. There was also a decline in the percentage employed in manufacturing from 1990 to 2000, from 17.28 to 14.08 and an

Table 2. Metropolitan Areas with the Greatest Positive and Negative Changes in the Rate of Concentrated Affluence Between 1990 and 2000.

Positive Change

MSA	*Change*
Danbury, CT PMSA	29.98
Lowell, MA--NH PMSA	24.32
San Jose, CA PMSA	22.48
Ann Arbor, MI PMSA	22.35
Ventura, CA PMSA	21.92
Bridgeport, CT PMSA	21.69
Middlesex--Somerset--Hunterdon, NJ PMSA	20.56
Iowa City, IA MSA	20.45
Baltimore, MD PMSA	20.08
Rochester, MN MSA	18.99
Fargo--Moorhead, ND--MN MSA	18.85
Laredo, TX MSA	18.39
Fort Lauderdale, FL PMSA	17.90
Springfield, IL MSA	17.24
Bremerton, WA PMSA	17.04
Victoria, TX MSA	16.77
San Antonio, TX MSA	16.44
Stockton--Lodi, CA MSA	16.08
Austin--San Marcos, TX MSA	16.02
Trenton, NJ PMSA	15.83
Average for 20 MSAs with greatest positive change	**19.67**

NOTE: MSA=Metropolitan Statistical Area
PMSA=Primary Metropolitan Statistical Area

Table 2. Metropolitan Areas with the Greatest Positive and Negative Changes in the Rate of Concentrated Affluence Between 1990 and 2000 (continued)

Negative Change

MSA	*Change*
Tallahassee, FL MSA	-20.61
Albany, GA MSA	-18.37
Macon, GA MSA	-14.05
Columbia, MO MSA	-12.81
Abilene, TX MSA	-12.43
New York, NY PMSA	-11.30
Gainesville, FL MSA	-8.71
Springfield, MO MSA	-8.63
Decatur, AL MSA	-8.33
Kankakee, IL PMSA	-7.45
Longview--Marshall, TX MSA	-6.37
Chattanooga, TN--GA MSA	-6.00
Honolulu, HI MSA	-5.88
Albany--Schenectady--Troy, NY MSA	-5.81
Ocala, FL MSA	-5.64
Lubbock, TX MSA	-5.49
Johnson City--Kingsport--Bristol, TN--VA MSA	-5.44
Springfield, MA MSA	-5.13
Sioux Falls, SD MSA	-5.08
Allentown--Bethlehem--Easton, PA MSA	-4.28
Average for 20 MSAs with greatest negative change	**-8.89**

NOTE: MSA=Metropolitan Statistical Area
PMSA=Primary Metropolitan Statistical Area

increase in the percentage employed in managerial, professional, and technical occupations from 1990 to 2000 (from 29.43 to 32.43). There were also increases in the mean household income and the log of affluent households from 1990 to 2000 (from 36,296.65 to 52,926.55 and from 4.35 to 4.50 respectively). However, the Gini concentration ratio only increased by 0.02 from 1990 to 2000 and the change in the index of D for racial segregation and the change in the index of D for economic segregation both declined slightly.

[Table 3 here]

Results for the Total Population

To test the hypotheses that the concentration of affluence will have changed between 1990 and 2000 as a result of social and economic characteristics of MSAs, ordinary least squares regression was used with the dependent variable being the change in the rate of concentrated affluence. Table 4 presents the results for the testing of economic/structural variables and racial variables on change in the rate of concentrated affluence over all MSAs.

[Table 4 here]

In Table 4, the change in the rate of concentrated affluence is regressed on the rate of concentrated affluence in 1990 and the region of the MSA. None of these variables has a significant effect.

[Table 5 here]

In Table 5, some economic/structural variables are added including those measuring change in employment in manufacturing as well as measuring the change in

Table 3. Means and Standard Deviations for All Variables in this Analysis

Variable Name	*Mean*	*Standard Deviation*
Rate of Concentrated Affluence 1990	7.79	9.37
Rate of Concentrated Affluence 2000	11.28	11.90
Change in the Rate of Concentrated Affluence, 1990-2000	3.49	6.77
Percentage Employed in Manufacturing 1990	17.28	7.34
Percentage Employed in Manufacturing 2000	14.08	6.60
Change in the Percentage Employed in Manufacturing, 1990-2000	-3.20	2.15
Percentage Employed in Professional, Managerial, and Technical 1990	29.43	4.89
Percentage Employed in Professional, Managerial, and Technical 2000	32.43	5.32
Change in the Percentage Employed in Professional, Managerial, and Technical 1990-2000	3.01	1.50
Mean Household Income 1990	36296.65	7624.30
Mean Household Income 2000	52926.55	11242.11
Change in Mean Household Income, 1990-2000	16629.90	6590.63
Gini Concentration Ratio 1990	0.43	0.05
Gini Concentration Ratio 2000	0.45	0.03
Change in Gini Concentration Ratio, 1990-2000	0.02	0.04
Log of Affluent Households 1990	4.35	0.49
Log of Affluent Households 2000	4.50	0.51
Change in the Log of Affluent Households, 1990-2000	0.14	0.16

N=331

Table 3. Means and Standard Deviations for All Variables in this Analysis (continued)

Variable Name	*Mean*	*Standard Deviation*
Index of D for Racial Segregation (White/Black) 1990	0.57	0.13
Index of D for Racial Segregation (White/Black) 2000	0.53	0.12
Change in the Index of D for Racial Segregation (White/Black), 1990-2000	-0.03	0.08
Index of D for Economic Segregation (Affluent/Nonaffluent) 1990	0.30	0.06
Index of D for Economic Segregation (Affluent/Nonaffluent) 2000	0.28	0.06
Index of D for Economic Segregation (Affluent/Nonaffluent), 1990-2000	-0.02	0.05

N=331

Table 4. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for the Total Population

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated			
Affluence 1990	0.04	0.04	0.06
Region			
West	0.08	1.22	0.01
South	-1.29	1.06	-0.09
Midwest	-0.52	1.16	-0.03
Intercept			3.77
Adjusted R^2			-0.001
Number of MSAs			331

*p<.05, **p<.01

Table 5. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for the Total Population

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*	
Rate of Concentrated Affluence 1990	0.02	0.04	0.03	
Region				
West	0.46	1.28	0.03	
South	-0.81	1.09	-0.06	
Midwest	-0.52	1.23	-0.03	
Change in % Manufacturing	0.01	0.19	0.00	
Change in % Professional, Managerial, and Technical	0.86	0.25	0.20	**
Intercept			1.12	
Adjusted R^2			0.028	
Number of MSAs			331	

*p<.05, **p<.01

employment in professional, managerial and technical occupations. Although change in manufacturing has no significant effect, change in professional, managerial, and technical occupations has a significant positive effect. The coefficient for the change in professional, managerial, and technical occupations (0.86) is positive and significant at the .01 level. This result is consistent with the hypothesis that in areas where there has been an increase in employment in professional, managerial, and technical occupations you would expect to see an increase in the concentration of affluence due to a greater possibility for the creation of affluent households. Also the adjusted R^2 has increased from -.001 to .028 from Table 4 to Table 5. The variables included in Table 5 explain 2.8 % of the change in the rate of concentrated affluence for the total population from 1990 to 2000.

[Table 6 here]

Table 6 adds other economic/structural variables including the change in mean household income and the change in the Gini concentration ratio. The change in mean household income has a significant positive effect on the change in the rate of concentrated affluence as expected (0.0002, significant at the $p<.01$ level); however, the Gini coefficient is not significant. The coefficient for change in the employment in professional, managerial, and technical occupations decreases from 0.86 to 0.71, but is still significant at the $p<.01$ level. This decrease in the coefficient for change in employment in professional, managerial, and technical occupations supports the idea that some of the effect of change in employment works through an increase in mean household income. Change in mean household income also has the largest standardized coefficient (0.22), which indicates it is the variable with the strongest

Table 6. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for the Total Population

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	-0.009	0.04	-0.01
Region			
West	0.07	1.27	-0.00
South	-0.43	1.08	-0.03
Midwest	-0.70	1.23	-0.04
Change in % Manufacturing	0.02	0.18	0.01
Change in % Professional, Managerial, and Technical	0.71	0.25	0.16 **
Change in Mean Household Income	0.0002	0.00	0.22 **
Change in Gini Concentration Ratio	-9.49	9.26	-0.06
Intercept			-1.74
Adjusted R^2			0.061
Number of MSAs			331

*p<.05, **p<.01

relationship with the change in the rate of concentrated affluence. The adjusted R^2 in this table has increased to 0.061, so the variables in Table 6 explain 6.1 % of the change in the rate of concentrated affluence from 1990 to 2000.

[Table 7 here]

Added in Table 7 is the change in the log of affluent households from 1990 to 2000. As expected, it is positively related to the change in the rate of concentrated affluence. The coefficient for the change in the log of affluent households (13.01) is significantly related to the change in the rate of concentrated affluence at the $p<.01$ level. The more affluent households there are, the greater the concentration of affluence. The standardized coefficient for the change in the log of affluent households is also the largest of the significant variables at 0.31, which indicates that change in the log of affluent households has the strongest relationship with the change in the rate of concentrated affluence followed by change in mean household income and change in employment in professional, managerial and technical occupations. The coefficient for mean household income remained significant at the $p<.01$ level. The coefficient for change in employment in professional, managerial, and technical occupations decreases with the addition of change in affluent households, going from 0.71 to 0.51. Its significance also decrease from $p<.01$ to $p<.05$. This supports the idea that changes in employment have allowed for the creation of more affluent households. The adjusted R^2 has also increased from 0.061 to 0.148. The variables included in Table 7 explain 14.8% of the change in the rate of concentrated affluence from 1990 to 2000.

[Table 8 here]

Table 7. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for the Total Population

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*	
Rate of Concentrated Affluence 1990	-0.01	0.04	-0.02	
Region				
West	-0.01	1.21	-0.00	
South	-1.20	1.04	-0.09	
Midwest	-0.49	1.17	-0.03	
Change in % Manufacturing	0.007	0.18	0.00	
Change in % Professional, Managerial, and Technical	0.51	0.24	0.11	*
Change in Mean Household Income	0.0002	0.00	0.17	**
Change in Gini Concentration Ratio	-8.02	8.82	-0.05	
Change in Affluent Households	13.01	2.22	0.31	**
Intercept			-1.96	
Adjusted R^2			0.148	
Number of MSAs			331	

*p<.05, **p<.01

Table 8. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for the Total Population

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	-0.02	0.04	-0.03
Region			
West	0.008	1.20	0.00
South	-1.06	1.04	-0.08
Midwest	-0.29	1.17	-0.02
Change in % Manufacturing	-0.01	0.18	-0.00
Change in % Professional, Managerial, and Technical	0.47	0.24	0.11 *
Change in Mean Household Income	0.0002	0.00	0.17 **
Change in Gini Concentration Ratio	-8.39	8.79	-0.05
Change in Affluent Households	13.06	2.22	0.31 **
Change in Segregation (Affluent/Nonaffluent)	12.95	7.13	0.09
Intercept			-1.78
Adjusted R^2			0.154
Number of MSAs			331

*p<.05, **p<.01

In Table 8, change in economic segregation between the affluent and nonaffluent households is considered. The change in economic segregation between the affluent and nonaffluent households is not significant. Change in employment in professional, managerial and technical occupations; change in mean household income, and change in the log of affluent households all remain significantly related to the change in the rate of concentrated affluence. The change in the log of affluent households continues to have the largest standardized coefficient (0.31) and thus continues to have the strongest relationship with the change in the rate of concentrated affluence. The adjusted R^2 also increases with the addition of economic segregation (from .148 to .154). The variables included in Table 8 explain 15.4 % of the change in the rate of concentrated affluence from 1990 to 2000.

[Table 9 here]

Finally, Table 9 adds racial segregation; however, it has no significant effect on the change in the rate of concentrated affluence. Although the change in segregation between whites and blacks is not related to the change in the rate of concentrated affluence overall from 1990 and 2000, it may have an impact on the change in the rate of concentrated affluence for whites or blacks considered separately. The change in the log of affluent households continues to have the strongest significant relationship with the change in the rate of concentrated affluence. The adjusted R^2 is 0.155, thus the variables included in Table 9 explain 15.5% of the change in the rate of concentrated affluence from 1990 to 2000.

Tables 4 through 9 support the hypothesis that social and economic changes have occurred between 1990 and 2000 that are positively related to the concentration of

Table 9. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for the Total Population

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	-0.02	0.04	-0.97
Region			
West	0.09	1.22	-0.59
South	-1.03	1.04	0.07
Midwest	-0.16	1.18	-0.99
Change in % Manufacturing	0.01	0.18	-0.14
Change in % Professional, Managerial, and Technical	0.48	0.24	0.07 *
Change in Mean Household Income	0.0002	0.00	0.17 **
Change in Gini Concentration Ratio	-8.12	8.79	-0.05
Change in Affluent Households	13.39	2.23	0.32 **
Change in Segregation (Affluent/Nonaffluent)	12.11	7.14	0.09
Change in Segregation (White/Black)	6.74	4.43	0.08
Intercept			-1.53
Adjusted R^2			0.155
Number of MSAs			331

*p<.05, **p<.01

affluence. MSAs that had an increase in professional, managerial, and technical employment between 1990 and 2000 had a corresponding increase in the rate of concentrated affluence. Also as hypothesized, some of the effect of changes in social and economic characteristics had an indirect effect through an increase in the mean household income. Finally, the change in the log of affluent households between 1990 and 2000 also had an expected positive effect on the change in the rate of concentrated affluence from 1990 to 2000.

Results for the Non-Hispanic White Population

To test the hypothesis that the concentration of affluence for whites will have changed between 1990 and 2000 as a result of social and economic characteristics of MSAs, ordinary least squares regression was used with the dependent variable being the change in the rate of concentrated affluence for whites. Tables 10 through 15 present the results for the testing of economic/structural variables and racial variables on the change of the rate of concentrated affluence for whites over all MSAs.

[Table 10 here]

In Table 10, the change in the rate of concentrated affluence for whites is regressed on the rate of concentrated affluence for whites in 1990 and the region of the MSA. None of these variables has a significant effect.

[Table 11 here]

In Table 11, the economic/structural variables are added including change in employment in manufacturing as well as measuring the change in employment in professional, managerial and technical occupations. Change in manufacturing has no

Table 10. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Whites

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.07	0.04	0.10
Region			
West	-0.04	1.33	-0.00
South	-1.38	1.15	-0.09
Midwest	-1.08	1.26	-0.06
Intercept			4.37
Adjusted R^2			0.005
Number of MSAs			331

*p<.05, **p<.01

Table 11. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Whites

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*	
Rate of Concentrated Affluence 1990	0.05	0.04	0.07	
Region				
West	0.31	1.40	0.02	
South	-0.89	1.19	-0.06	
Midwest	-1.13	1.34	-0.07	
Change in % Manufacturing	0.03	0.20	0.01	
Change in % Professional, Managerial, and Technical	0.92	0.27	0.19	**
Intercept			1.64	
Adjusted R^2			0.033	
Number of MSAs			331	

*p<.05, **p<.01

significant effect; however, change in professional, managerial, and technical occupations has a significant positive effect. The coefficient for the change in professional, managerial, and technical occupations (0.92) is positive and significant at the .01 level. Also the adjusted R^2 has increased from 0.005 to 0.033 from Table 10 to Table 11. The variables included in Table 11 explain 3.3% of the change in the rate of concentrated affluence for whites from 1990 to 2000.

[Table 12 here]

Table 12 adds other economic/structural variables including the change in mean household income and the change in the Gini concentration ratio. The change in mean household income has a significant positive effect on the change in the rate of concentrated affluence for whites as expected (0.0002 at the $p<.01$ level); however, the Gini coefficient is not significant. The coefficient for change in the employment in professional, managerial, and technical occupations decreases from 0.92 to 0.76, but is still significant at the $p<.01$ level. This decrease in the coefficient for change in employment in professional, managerial, and technical occupations supports the idea that much of the effect of change in employment works through an increase in mean household income. Change in mean household income has the largest standardized coefficient (0.21) and thus the strongest relationship with the change in the rate of concentrated affluence for whites from 1990 to 2000. The adjusted R^2 in this table has increased to 0.062. The variables in Table 12 explain 6.2% of the change in the rate of concentrated affluence for whites from 1990 to 2000.

[Table 13 here]

Table 12. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Whites

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*	
Rate of Concentrated Affluence 1990	0.02	0.04	0.03	
Region				
West	-0.08	1.38	-0.00	
South	-0.48	1.18	-0.03	
Midwest	-1.30	1.34	-0.08	
Change in % Manufacturing	0.05	0.20	0.01	
Change in % Professional, Managerial, and Technical	0.76	0.27	0.15	**
Change in Mean Household Income	0.0002	0.00	0.21	**
Change in Gini Concentration Ratio	-9.74	10.07	-0.06	
Intercept			-1.33	
Adjusted R^2			0.062	
Number of MSAs			331	

*p<.05, **p<.01

Table 13. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Whites

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*	
Rate of Concentrated Affluence 1990	0.02	0.04	0.03	
Region				
West	-0.17	1.32	-0.01	
South	-1.33	1.13	-0.09	
Midwest	-1.08	1.28	-0.06	
Change in % Manufacturing	0.03	0.19	0.01	
Change in % Professional, Managerial, and Technical	0.54	0.26	0.11	*
Change in Mean Household Income	0.0002	0.00	0.16	**
Change in Gini Concentration Ratio	-8.08	9.59	-0.05	
Change in Affluent Households	14.09	2.42	0.31	**
Intercept			-1.58	
Adjusted R^2			0.149	
Number of MSAs			331	

*p<.05, **p<.01

Added to Table 13 is the change in the log of affluent households from 1990 to 2000. As expected, it is positively related to the change in the rate of concentrated affluence for whites. The coefficient for the change in the log of affluent households (14.09) is significantly related to the change in the rate of concentrated affluence for whites at the $p<.01$ level. The more affluent households there are, the greater the concentration of affluence for whites. The standardized coefficient for the change in the log of affluent households is also the largest (0.31) out of the significant variables, which indicates it has the strongest relationship with the change in the rate of concentrated affluence for whites. The coefficient for mean household income remained significant at the $p<.01$ level. The coefficient for change in employment in professional, managerial, and technical occupations decreases with the addition of change in affluent households, going from 0.76 to 0.54. Its significance also decreases from $p<.01$ to $p<.05$. This supports the idea that changes in employment have allowed for the creation of more affluent households. The adjusted R^2 has also increased from 0.062 to 0.149. The variables included in Table 13 explain 14.9% of the change in the rate of concentrated affluence for whites from 1990 to 2000.

[Table 14 here]

In Table 14, change in economic segregation between the affluent and nonaffluent households is considered. The change in economic segregation is not significantly related to the change in the concentration of affluence for whites. However, the adjusted R^2 increases with the addition of economic segregation (from .149 to .154), thus the variables included in Table 14 explain 15.4% of the change in the rate of concentrated affluence for whites. With the addition of the change in economic

Table 14. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Whites

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.02	0.04	0.02
Region			
West	-0.14	1.31	-0.01
South	-1.17	1.13	-0.08
Midwest	-0.86	1.28	-0.05
Change in % Manufacturing	0.01	0.19	0.00
Change in % Professional, Managerial, and Technical	0.51	0.26	0.10 *
Change in Mean Household Income	0.0002	0.00	0.16 **
Change in Gini Concentration Ratio	-8.46	9.56	-0.05
Change in Affluent Households	14.14	2.41	0.31 **
Change in Segregation (Affluent/Nonaffluent)	13.29	7.77	0.09
Intercept			-1.40
Adjusted R^2			0.154
Number of MSAs			331

*p<.05, **p<.01

*

segregation, change in mean household income remains significant at the p<.01 level as does change in the log of affluent households. Change in the log of affluent households also continues to have the largest standardized coefficient (0.31) out of the significant variables. Change in employment in professional, managerial, and technical occupations remains significant at the p<.05 level; although its unstandardized coefficient decreases from 0.54 to 0.51. This supports the hypothesis that change in employment affects economic segregation, and could work through this variable indirectly.

[Table 15 here]

Table 15 adds racial segregation; however, it has no significant effect on the change in the rate of concentrated affluence for whites. Change in mean household income and change in the log of affluent households both remain significant at the p<.01 level. Change in employment in professional, managerial, and technical occupations is significant at the p<.05 level.

Tables 10 through 15 support the hypothesis that social and economic changes have occurred between 1990 and 2000 that are positively related to the concentration of affluence for whites. MSAs that had an increase in professional, managerial, and technical employment between 1990 and 2000 had a corresponding increase in the rate of concentrated affluence. Also as hypothesized, some of the effect of changes in social and economic characteristics had an indirect effect through an increase in the mean household income. Although it does not reach significance, the fact that the coefficient for racial segregation is positive suggests that the segregation of whites from blacks tends to contribute to the concentration of affluence among whites. Finally, the change

Table 15. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Whites

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.01	0.04	0.02
Region			
West	-0.06	1.33	-0.08
South	-1.14	1.13	-0.04
Midwest	-0.74	1.28	0.01
Change in % Manufacturing	0.03	0.19	0.10
Change in % Professional, Managerial, and Technical	0.51	0.26	0.10 *
Change in Mean Household Income	0.0002	0.00	0.16 **
Change in Gini Concentration Ratio	-8.22	9.57	-0.05
Change in Affluent Households	14.45	2.43	0.32 **
Change in Segregation (Affluent/Nonaffluent)	12.48	7.79	0.08
Change in Segregation (White/Black)	6.38	4.84	0.07
Intercept			-1.16
Adjusted R^2			0.153
Number of MSAs			331

*p<.05, **p<.01

in the log of affluent households between 1990 and 2000 also had an expected positive affect on the change in the rate of concentrated affluence for whites from 1990 to 2000.

Results for the Black Population

To test the hypotheses that the concentration of affluence for blacks will have changed between 1990 and 2000 as a result of social and economic characteristics of MSAs, ordinary least squares regression was used with the dependent variable being the change in the rate of concentrated affluence for blacks. Tables 16 through 21 present the results for the testing of economic/structural variables and racial variables on the change of the rate of concentrated affluence for blacks over the 208 MSAs that had a black population of at least 10,000.

[Table 16 here]

In Table 16, the change in the rate of concentrated affluence for blacks is regressed on the rate of concentrated affluence for blacks in 1990 and the region of the MSA. The positive coefficients for the West (4.11 significant at the $p<.01$ level) indicate an increase in the change in the rate of concentrated affluence for blacks from 1990 and 2000 in the West as compared to the Northeast.

[Table 17 here]

In Table 17, the economic/structural variables are added including change in employment in manufacturing as well as measuring the change in employment in professional, managerial and technical occupations. Change in manufacturing has no significant effect; however, change in professional, managerial, and technical occupations has a significant positive effect. The unstandardized coefficient for the

Table 16. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Blacks

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.13	0.09	0.11
Region			
West	4.11	1.20	0.29 **
South	0.56	0.90	0.06
Midwest	0.71	1.06	0.06
Intercept			1.55
Adjusted R^2			0.078
Number of MSAs			208

*p<.05, **p<.01

Table 17. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Blacks

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.06	0.09	0.05
Region			
West	4.72	1.26	0.34 **
South	0.94	0.94	0.10
Midwest	1.07	1.10	0.09
Change in % Manufacturing	-0.03	0.18	-0.01
Change in % Professional, Managerial, and Technical	0.57	0.23	0.18 **
Intercept			-0.37
Adjusted R^2			0.098
Number of MSAs			208

*p<.05, **p<.01

change in professional, managerial, and technical occupations (0.57) is positive and significant at the .01 level. Also the adjusted R^2 has increased from 0.078 to 0.098 from Table 16 to Table 17. The variables included in Table 17 explain 9.8% of the change in the rate of concentrated affluence for blacks from 1990 to 2000. The coefficient for the West remains significant at the $p<.01$ level with the addition of these economic/structural variables and also has the largest standardized coefficient (0.34) of the significant variables, which signifies it has the strongest relationship with the change in the rate of concentrated affluence for blacks.

[Table 18 here]

Table 18 adds other economic/structural variables including the change in mean household income and the change in the Gini concentration ratio. Neither the change in mean household income nor the Gini coefficient is significant. The coefficient for change in the employment in professional, managerial, and technical occupations decreases from 0.57 to 0.50, but is still significant at the $p<.05$ level. This decrease in the coefficient for change in employment in professional, managerial, and technical occupations supports the idea that some of the effect of change in employment works through an increase in mean household income. The adjusted R^2 in this table has increased to 0.101, thus the variables included in Table 18 explain 10.1% of the change in the rate of concentrated affluence for blacks from 1990 to 2000. The West remains significant at the $p<.01$ level, although its coefficient has decreased from 4.72 to 4.52 with the addition of the change in mean household income and change in Gini concentration ratio. This indicates that part of the effect of the West is due to change in mean household income and the Gini concentration ratio.

Table 18. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Blacks

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.06	0.09	0.05
Region			
West	4.52	1.27	0.32 **
South	1.11	0.95	0.12
Midwest	1.07	1.12	0.09
Change in % Manufacturing	-0.02	0.18	-0.01
Change in % Professional, Managerial, and Technical	0.50	0.23	0.16 *
Change in Mean Household Income	0.00008	0.00	0.12
Change in Gini Concentration Ratio	-1.67	6.45	-0.02
Intercept			-1.48
Adjusted R^2			0.101
Number of MSAs			208

*p<.05, **p<.01

[Table 19 here]

Added to Table 19 is the change in the log of affluent households from 1990 to 2000. As expected, it is positively related to the change in the rate of concentrated affluence for blacks. The coefficient for the change in the log of affluent households (6.92) is significantly related to the change in the rate of concentrated affluence for blacks at the $p<.01$ level. The more affluent households there are, the greater the concentration of affluence. The coefficient for change in employment in professional, managerial, and technical occupations decreases with the addition of change in affluent households, going from 0.50 to 0.37 and is no longer significant. This indicates that for blacks, much of the effect of changes in employment in professional, managerial, and technical occupations is an indirect effect on the change in the rate of concentrated affluence through a change in the log of affluent households. The adjusted R^2 has also increased from 0.101 to 0.165, which means that variables included in Table 19 explain 16.5% of the change in the rate of concentrated affluence for blacks from 1990 to 2000. The coefficient for the West remains significant at the $p<.01$ level and also continues to have the largest standardized coefficient (0.33) of the significant variables.

[Table 20 here]

In Table 20, change in economic segregation between the affluent and nonaffluent households is considered. The change in economic segregation is not significantly related to the change in the concentration of affluence for blacks. With the addition of the change in economic segregation, change in the log of affluent households remains significant at the $p<.01$ level as does the coefficient for the West.

Table 19. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Blacks

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.05	0.09	0.04
Region			
West	4.66	1.22	0.33 **
South	0.73	0.92	0.08
Midwest	1.34	1.08	0.12
Change in % Manufacturing	-0.03	0.18	-0.01
Change in % Professional, Managerial, and Technical	0.37	0.23	0.12
Change in Mean Household Income	0.00005	0.00	0.07
Change in Gini Concentration Ratio	-0.65	6.22	-0.01
Change in Affluent Households	6.92	1.72	0.27 **
Intercept			-1.59
Adjusted R^2			0.165
Number of MSAs			208

*p<.05, **p<.01

Table 20. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Blacks

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.05	0.09	0.04
Region			
West	4.64	1.22	0.33 **
South	0.78	0.92	0.08
Midwest	1.43	1.08	0.12
Change in % Manufacturing	-0.03	0.18	-0.01
Change in % Professional, Managerial, and Technical	0.35	0.23	0.11
Change in Mean Household Income	0.00005	0.00	0.08
Change in Gini Concentration Ratio	-0.69	6.22	-0.01
Change in Affluent Households	6.93	1.72	0.27 **
Change in Segregation (Affluent/Nonaffluent)	5.64	5.75	0.06
Intercept			-1.47
Adjusted R^2			0.165
Number			208

*p<.05, **p<.01

There is no change in the adjusted R^2 with the addition of the change in segregation between the affluent and nonaffluent.

[Table 21 here]

Table 21 adds racial segregation; however, it has no significant effect on the change in the rate of concentrated affluence for blacks. The West and change in the log of affluent households both remain significant at the $p<.01$ level. Both of their coefficients have decreased (from 4.64 to 4.45 and from 6.93 to 6.41 respectively). The West continues to have the largest standardized coefficient of the significant variables (0.32) and thus continues to have the strongest significant relationship with the change in the rate of concentrated affluence for blacks from 1990 to 2000. The adjusted R^2 has increased in Table 21 to 0.172, which means that the variables included in this table explain 17.2% of the change in the rate of concentrated affluence for blacks.

Tables 16 through 21 support the hypothesis that social and economic changes have occurred between 1990 and 2000 that are positively related to the concentration of affluence for blacks. The change in the log of affluent households between 1990 and 2000 had an expected positive effect on the change in the rate of concentrated affluence for both blacks and whites from 1990 to 2000; however, the West remained significant at the $p<.01$ level for blacks when it did not for whites. This suggests that for blacks the change in the rate of concentrated affluence is significantly affected by region of the country, whereas for whites it is not. Also, for blacks the change in segregation for whites and blacks, although not significant, is negatively related to the change in the rate of concentrated affluence, where for whites it is has a positive relationship. Thus,

Table 21. OLS Regression Predicting the Change in the Rate of Concentrated Affluence for Blacks

Independent Variable	*Unstandardized Coefficient*	*Standard Error*	*Standardized Coefficient*
Rate of Concentrated Affluence 1990	0.05	0.09	0.03
Region			
West	4.45	1.22	0.32 **
South	0.61	0.92	0.07
Midwest	1.12	1.10	0.10
Change in % Manufacturing	-0.01	0.18	-0.01
Change in % Professional, Managerial, and Technical	0.35	0.23	0.11
Change in Mean Household Income	0.00005	0.00	0.08
Change in Gini Concentration Ratio	-0.72	6.20	-0.01
Change in Affluent Households	6.41	1.74	0.25 **
Change in Segregation (Affluent/Nonaffluent)	6.70	5.76	0.08
Change in Segregation (White/Black)	-6.99	4.31	-0.11
Intercept			-1.31
Adjusted R^2			0.172
Number of MSAs			208

*p<.05, **p<.01

for blacks as segregation between whites and blacks increases the change in the rate of concentrated affluence decreases. Finally, unlike for whites where employment in professional, managerial and technical occupations; mean household income, and change in the log of affluent households remained significant, this was not the case for blacks. Only change in the log of affluent households and region, more specifically the West, had significant relationships with the change in the rate of concentrated affluence for blacks once all variables had been added. Thus, more important than mean household income and type of employment for blacks in determining the change in the concentration of affluence is region and the increase in the log of affluent households.

CHAPTER IV

DISCUSSION AND CONCLUSIONS

This study examined the increase in the concentration of affluence between 1990 and 2000. The units of analysis used in this research were the metropolitan statistical areas for 1990 and 2000. As changes in metropolitan boundaries occurred between 1990 and 2000, a consistent set of boundaries based on the 2000 U.S. Census were used for my analysis. All data came from summary file 3 of the 2000 U.S. Census. The analyses used ordinary least squares regression.

The dependent variable in this study was the change from 1990 to 2000 in the rate of concentrated affluence. The concentration of affluence is considered to have increased if there has been an increase in the percentage of affluent households that are located in affluent neighborhoods. Variables were included in the analysis as control variables as described in St. John (2002). One of these variables is region of the country where MSAs are located. Others included: the change in the proportion of the labor force employed in manufacturing from 1990 to 2000 and the change in the proportion of the labor force employed in professional, managerial, and technical occupations from 1990 to 2000, the change in mean household income from 1990 to 2000, and the change in the number of affluent households in an MSA from 1990 to 2000.

To consider the effects of race on the concentration of affluence the index of dissimilarity was used to measure the amount of residential segregation between blacks and whites. The impact of the change in the rate of segregation between races was considered separately for whites and blacks, as racial segregation was expected to

contribute to the concentration of affluent whites but to impede the concentration of affluent blacks.

The first hypothesis considered was that the concentration of affluence had increased in the period from 1990 to 2000 due to social and economic changes that have occurred in that same time period. The second hypothesis considered was that the concentration of affluence had increased more in metropolitan areas with certain changes in their social and economic characteristics between 1990 and 2000. For the third hypothesis, I expected to find that the black affluent had not experienced the increasing concentration of affluence between 1990 and 2000 to the same extent that whites had.

I found support for the first hypothesis as the overall concentration of affluence increased from a mean of 7.79 in 1990 to a mean of 11.28 in 2000. With regard to the second hypothesis, I also found that MSAs that experienced an increase in professional, managerial, and technical employment between 1990 and 2000 had a corresponding increase in the rate of concentrated affluence. Also as hypothesized, some of effect of changes in the social and economic characteristics (e.g. changes in employment in professional, managerial, and technical occupations) had an indirect effect through an increase in mean household income from 1990 to 2000. Finally, I also found that the log of affluent households between 1990 and 2000 also had a positive relationship with the change in the concentration of affluence from 1990 to 2000.

With regard to hypothesis three, I found limited support that the black and white affluent did not experience the increasing concentration of affluence to the same extent. Although the index of D for racial segregation was not significant for either whites or

blacks it did have a different relationship with the change in the concentration of affluence for whites from 1990 to 2000 and the change in the concentration of affluence for blacks from 1990 to 2000. For blacks the change in the segregation for whites and blacks from 1990 to 2000 has a negative relationship with the change in the rate of concentrated affluence for blacks from 1990 to 2000; however, the change in the segregation for whites and blacks from 1990 to 2000 has a positive relationship with the change in the rate of concentrated affluence for whites from 1990 to 2000. Thus, even though it is not significant it does impact the change in the rates of concentrated affluence for whites and blacks differently.

There are also different variables that affected the change in the rate of the concentration of affluence for whites and blacks from 1990 to 2000. For whites, the same three variables that had a significant relationship with the change in the rate of concentrated affluence for the total population are the same as those that had a significant relationship with the change in the rate of concentrated affluence for whites including: 1) change in the percentage employed in professional, managerial, and technical occupations; 2) change in mean household income, and 3) change in the log of affluent households. However, in contrast to the total population, among blacks the variables that had a significant relationship with the change in the rate of concentrated affluence were: the Western region of the US and the change in the log of affluent households.

This study showed that the concentration of affluence increased from 1990 to 2000, and several factors were significantly related to this increase. This study found that increases in the log of affluent households from 1990 to 2000 and mean household

income from 1990 to 2000 had significant positive relationships with the change in the concentration of affluence from 1990 to 2000. This finding is consistent with previous studies in showing that the greater the number of affluent households then the greater the concentration of affluence. Another variable significantly related to the concentration of affluence is the percentage employed in professional, managerial, and technical occupations. It is positively related to the change in the rate of concentrated affluence from 1990 to 2000. This supports the theory that part of the growing inequality between the wealthy and poor in U.S. society is due to changes in the structure of the American economy (Reich 1989, Sassen 1991). If polarization theorists are correct that a shift to a service based economy has increased inequality and this division is relatively permanent (Morris, et. al. 1994), then future studies of the concentration of affluence should find that employment in professional, managerial, and technical occupations is significantly related to the concentration of affluence.

The Gini coefficient and the index of D have traditionally been used to measure the concentration of affluence; however, this study showed that they were not related to the change in the rate of concentrated affluence from 1990 to 2000. This study also showed that the Gini coefficient only had a slight positive change from 1990 to 2000, while the index of D for racial segregation and economic segregation declined. This suggests that in future studies of the concentration of affluence researchers will need to look beyond these indices in order to explain the concentration of affluence.

Based on these findings that the concentration of affluence increased from 1990 to 2000, the effects of the increasing concentration of affluence needs further study. Previous studies such as Wilson (1987) have found that there are "concentration

effects" for the poor who are living in areas mainly inhabited by the poor, so if there are an increasing number of affluent households and the affluent are increasingly congregating in areas inhabited by other affluent people, then researchers should see "concentration effects" emerge for the affluent. As long as it is beneficial for the affluent to be concentrated, then they will continue to do so. The concentration of affluence has been somewhat ignored in demographic research, with most attention going to the concentration of the poor. However, as the concentration of affluence has been show to increase, this can have consequences for communities that have a concentration of affluence with regard to social services, family life, and health (Alba and Logan 1993, Alba, Logan, and Bellair 1994, Brooks-Gunn et al. 1993, and Browning and Cagney 2003). The increasing concentration of affluence could also have negative consequences for the communities they are leaving behind with regard to social services and other community services funded through taxes.

Not only is the concentration of affluence an area that needs further exploration, but also racial differences in concentration of affluence. This study adds to the literature on the racial differences between blacks and whites with regard to the concentration of affluence from 1990 to 2000. It shows that the same factors are not necessarily significantly related to the concentration of affluence with regard to whites and blacks. Unlike for whites, mean household income and change in the percentage of employment in professional, managerial, and technical occupations were not shown to be significantly related to the concentration of affluence for blacks once other factors were considered. However, region of the West did remain a significant variable. This shows that the same factors that impact the concentration of affluence for whites are not

necessarily the same factors that are related to the concentration of affluence for blacks and vice versa.

Thus to understand the concentration of affluence for blacks, it seems that region is a much more significant variable then originally assumed. Future studies should include factors related to specific regions (especially the West) when considering race and the concentration of affluence. The reason that the region of the West may be important when considering the black concentration of affluence could be due to a phenomenon noted by Bishop (2008;133) whereby affluent and highly educated whites tend to congregate in high-tech cities, while blacks "moved to cities with strong black communities: Atlanta, Washington, New York, Chicago, Houston, Dallas, Fort Lauderdale, Baltimore, and Philadelphia." None of the cities that Bishop noted as having strong black communities are located in the West. Therefore, if there are no black communities available blacks may be more likely to segregate by income than by race, which would assist in explaining the significance of the West with regard to the concentration of affluence for blacks.

Whites and blacks should also be considered separately when studying the concentration of affluence as different variables have different effects for whites and blacks. So although the factors that impact the concentration of affluence for whites are the same as those related to the concentration of affluence for the total population the significant variables for blacks differ. With regard to racial-ethnic groups, it may also be beneficial in future studies to consider the Hispanic population. As the U.S. has an increasing Hispanic population, it would be beneficial to study how the Hispanic

experience may differ from that of blacks and whites as not much research has been done on this racial-ethnic group with regard to the concentration of affluence.

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Appendix 1. 1990 and 2000 levels of concentrated affluence and ranks

MSA	*1990*	*2000*	*1990 rank*	*2000 rank*
Abilene, TX MSA	33.29	20.86	8	68
Akron, OH PMSA	18.1	23.52	55	54
Albany, GA MSA	31.54	13.17	10	119
Albany--Schenectady--Troy, NY MSA	10.41	4.6	109	197
Albuquerque, NM MSA	12.32	13.36	93	118
Alexandria, LA MSA	0	0.1	212	225
Allentown--Bethlehem--Easton, PA MSA	7.13	2.85	138	214
Altoona, PA MSA	0	0	213	247
Amarillo, TX MSA	8.28	14.9	130	109
Anchorage, AK MSA	18.01	21.18	56	65
Ann Arbor, MI PMSA	18.01	40.36	57	6
Anniston, AL MSA	0	0	214	248
Appleton--Oshkosh--Neenah, WI MSA	2.16	8.03	189	170
Asheville, NC MSA	2.87	2.69	183	215
Athens, GA MSA	0.44	0	198	241
Atlanta, GA MSA	24.59	36.59	20	13
Atlantic--Cape May, NJ PMSA	2.37	0	188	237
Auburn--Opelika, AL MSA	0	8.26	215	166
Augusta--Aiken, GA--SC MSA	10.82	17.18	103	96
Austin--San Marcos, TX MSA	20.8	36.82	36	12
Bakersfield, CA MSA	6.75	15.54	141	104
Baltimore, MD PMSA	24.32	44.4	21	4
Bangor, ME MSA	0	0	216	249
Barnstable--Yarmouth, MA MSA	0.51	0	197	240
Baton Rouge, LA MSA	11.74	7.64	99	177
Beaumont--Port Arthur, TX MSA	0	0	217	250
Bellingham, WA MSA	0	0	218	251
Benton Harbor, MI MSA	0	4.44	219	199
Bergen--Passaic, NJ PMSA	24.87	31.1	19	28
Billings, MT MSA	6.9	7.13	140	181
Biloxi--Gulfport--Pascagoula, MS MSA	0.05	0.05	207	226
Binghamton, NY MSA	0.36	0	200	243
Birmingham, AL MSA	18.58	20.67	49	69
Bismarck, ND MSA	0	0	220	252
Bloomington, IN MSA	0	9.86	221	152
Bloomington--Normal, IL MSA	4.96	16.15	159	101
Boise City, ID MSA	4.85	14.73	160	112

MSA	1990	2000	1990 rank	2000 rank
Boulder--Longmont, CO PMSA	37.99	33.74	2	18
Brazoria, TX PMSA	14	21.04	77	67
Bremerton, WA PMSA	0.223	17.26	201	94
Bridgeport, CT PMSA	8.45	30.14	128	32
Brockton, MA PMSA	0	6.78	222	185
Brownsville--Harlingen--San Benito, TX MSA	0	0	223	253
Bryan--College Station, TX MSA	0	15.37	224	107
Buffalo--Niagara Falls, NY MSA	5.74	10.93	146	138
Burlington, VT MSA	0.58	0	196	239
Canton--Massillon, OH MSA	0	3.5	225	207
Casper, WY MSA	0	0	226	254
Cedar Rapids, IA MSA	0	12.97	227	122
Champaign--Urbana, IL MSA	0	2.33	228	218
Charleston, WV MSA	9.14	7.51	119	179
Charleston--North Charleston, SC MSA	4.74	8.31	162	164
Charlotte--Gastonia--Rock Hill, NC--SC MSA	20.16	28.06	38	38
Charlottesville, VA MSA	10.66	16.04	106	102
Chattanooga, TN--GA MSA	10.63	4.63	107	196
Cheyenne, WY MSA	0	0	229	255
Chicago, IL PMSA	18.33	26.22	52	44
Chico--Paradise, CA MSA	0	0	230	256
Cincinnati, OH--KY--IN PMSA	15.09	21.04	72	66
Clarksville--Hopkinsville, TN--KY MSA	3.53	3	175	211
Cleveland--Lorain--Elyria, OH PMSA	17.72	13.81	58	114
Colorado Springs, CO MSA	20.96	35.22	35	16
Columbia, MO MSA	12.81	0	86	230
Columbia, SC MSA	6.57	20.2	142	75
Columbus, GA--AL MSA	12.03	8.74	96	160
Columbus, OH MSA	19.21	27.37	45	40
Corpus Christi, TX MSA	3.12	8.57	180	163
Corvallis, OR MSA	0	0	231	257
Cumberland, MD--WV MSA	0	0	232	258
Dallas, TX PMSA	28.46	39.74	12	8
Danbury, CT PMSA	21.87	51.85	27	2
Danville, VA MSA	0	0	233	259
Davenport--Moline--Rock Island, IA--IL MSA	0.14	6.01	202	191
Daytona Beach, FL MSA	0.03	0	211	246
Dayton--Springfield, OH MSA	8	15.18	132	108
Decatur, AL MSA	8.33	0	129	231
Denver, CO PMSA	26.76	35.57	14	14

MSA	*1990*	*2000*	*1990 rank*	*2000 rank*
Detroit, MI PMSA	25.42	24.28	17	53
Dothan, AL MSA	0	0	234	260
Dover, DE MSA	0	0	235	261
Dubuque, IA MSA	0	0	236	262
Duluth--Superior, MN--WI MSA	4.31	2.96	166	212
Dutchess County, NY PMSA	4.57	18.09	165	89
Eau Claire, WI MSA	0	0	237	263
El Paso, TX MSA	14.63	10.65	74	142
Elkhart--Goshen, IN MSA	0.38	0	199	242
Elmira, NY MSA	0	0	238	264
Enid, OK MSA	0	0	239	265
Erie, PA MSA	5.28	3.61	154	204
Eugene--Springfield, OR MSA	0	0	240	266
Evansville--Henderson, IN--KY MSA	4.99	13.13	158	121
Fargo--Moorhead, ND--MN MSA	0	18.85	241	85
Fayetteville, NC MSA	0	6.57	242	188
Fayetteville--Springdale--Rogers, AR MSA	0	0	243	267
Fitchburg--Leominster, MA PMSA	2.43	4.93	187	195
Flagstaff, AZ--UT MSA	0	0	244	268
Flint, MI PMSA	2.86	15.43	184	106
Florence, AL MSA	0	0	245	269
Florence, SC MSA	0	0	246	270
Fort Collins--Loveland, CO MSA	12.96	11.15	85	136
Fort Lauderdale, FL PMSA	8.92	26.82	125	42
Fort Myers--Cape Coral, FL MSA	0.82	10.57	195	144
Fort Pierce--Port St. Lucie, FL MSA	3.32	9.93	177	149
Fort Smith, AR--OK MSA	0	0	247	271
Fort Walton Beach, FL MSA	5.36	11.37	153	134
Fort Wayne, IN MSA	16.27	14.84	66	111
Fort Worth--Arlington, TX PMSA	23.58	31.33	22	27
Fresno, CA MSA	7.98	6.56	133	189
Gadsden, AL MSA	0	0	248	272
Gainesville, FL MSA	21.86	13.15	28	120
Galveston--Texas City, TX PMSA	11.81	19.64	98	80
Gary, IN PMSA	5.55	9.81	149	154
Glens Falls, NY MSA	0	0	249	273
Goldsboro, NC MSA	0	0	250	274
Grand Forks, ND--MN MSA	12.73	11.09	89	137
Grand Junction, CO MSA	0	0	251	275
Grand Rapids--Muskegon--Holland, MI MSA	9.06	11.51	121	132

MSA	*1990*	*2000*	*1990 rank*	*2000 rank*
Greeley, CO PMSA	0	0	253	277
Green Bay, WI MSA	5.08	5.77	156	193
Greensboro--Winston-Salem--High Point, NC MSA	9.33	14.88	116	110
Greenville, NC MSA	0	0	254	278
Greenville--Spartanburg--Anderson, SC MSA	8.57	8.65	127	162
Hagerstown, MD PMSA	0	0	255	279
Hamilton--Middletown, OH PMSA	23.12	35.51	24	15
Harrisburg--Lebanon--Carlisle, PA MSA	1.19	11.19	194	135
Hartford, CT MSA	16.75	19.24	62	82
Hattiesburg, MS MSA	0	0	256	280
Hickory--Morganton--Lenoir, NC MSA	0	0	257	281
Honolulu, HI MSA	34.17	28.29	6	37
Houma, LA MSA	0	8.25	258	167
Houston, TX PMSA	31.96	40.18	9	7
Huntington--Ashland, WV--KY--OH MSA	0	0	259	282
Huntsville, AL MSA	29.97	30.25	11	31
Indianapolis, IN MSA	20.13	30.27	39	30
Iowa City, IA MSA	0	20.45	260	72
Jackson, MI MSA	9.43	8.22	115	168
Jackson, MS MSA	13.97	25.22	78	48
Jackson, TN MSA	0	11.82	261	130
Jacksonville, FL MSA	9.04	20.36	122	73
Jacksonville, NC MSA	0	0	262	283
Jamestown, NY MSA	0	0	263	284
Janesville--Beloit, WI MSA	0	0	264	285
Jersey City, NJ PMSA	3.31	10.37	178	145
Johnson City--Kingsport--Bristol, TN--VA MSA	5.46	0.02	152	228
Johnstown, PA MSA	0	0	265	286
Jonesboro, AR MSA	0	0	266	287
Joplin, MO MSA	0	0	267	288
Kalamazoo--Battle Creek, MI MSA	4.06	7.02	169	183
Kankakee, IL PMSA	7.45	0	135	232
Kansas City, MO--KS MSA	23.58	25.35	23	47
Kenosha, WI PMSA	0	3.41	268	208
Killeen--Temple, TX MSA	0	0	269	289
Knoxville, TN MSA	13.37	14.28	83	113
Kokomo, IN MSA	0	6.67	270	186
La Crosse, WI--MN MSA	0	0	271	290
Lafayette, IN MSA	0	0	272	291
Lafayette, LA MSA	5.48	5.57	150	194

MSA	1990	2000	1990 rank	2000 rank
Lakeland--Winter Haven, FL MSA	5.02	1.73	157	222
Lancaster, PA MSA	1.85	3.01	191	210
Lansing--East Lansing, MI MSA	11.3	13.54	101	116
Laredo, TX MSA	0	18.39	274	87
Las Cruces, NM MSA	0	0	275	292
Las Vegas, NV--AZ MSA	3.82	10.78	172	140
Lawrence, KS MSA	0	9.16	276	159
Lawrence, MA--NH PMSA	25.94	28.99	15	35
Lawton, OK MSA	0	0	277	293
Lewiston--Auburn, ME MSA	0	0	278	294
Lexington, KY MSA	4.71	20.11	163	77
Lima, OH MSA	4.07	3.53	168	206
Lincoln, NE MSA	21.98	18.78	26	86
Little Rock--North Little Rock, AR MSA	0	8.29	279	165
Longview--Marshall, TX MSA	6.37	0	143	233
Los Angeles--Long Beach, CA PMSA	18.38	17.2	51	95
Louisville, KY--IN MSA	18.4	20.28	50	74
Lowell, MA--NH PMSA	7.3	31.62	136	25
Lubbock, TX MSA	16.33	10.84	65	139
Lynchburg, VA MSA	0	0	280	295
Macon, GA MSA	18.26	4.21	53	200
Madison, WI MSA	13.04	13.57	84	115
Manchester, NH PMSA	15.96	20.18	68	76
Mansfield, OH MSA	0	0	281	296
McAllen--Edinburg--Mission, TX MSA	0	7.99	282	172
Medford--Ashland, OR MSA	0	0	283	297
Melbourne--Titusville--Palm Bay, FL MSA	3.99	6.6	170	187
Memphis, TN--AR--MS MSA	26.88	32.19	13	22
Merced, CA MSA	0	1.75	284	221
Miami, FL PMSA	13.94	16.23	79	100
Middlesex--Somerset--Hunterdon, NJ PMSA	14.46	35.02	75	17
Milwaukee--Waukesha, WI PMSA	18.26	25.85	54	45
Minneapolis--St. Paul, MN--WI MSA	20.4	31.77	37	23
Missoula, MT MSA	0	0	285	298
Mobile, AL MSA	2.04	1.25	190	223
Modesto, CA MSA	0	2.18	286	220
Monmouth--Ocean, NJ PMSA	19.65	31.74	41	24
Monroe, LA MSA	0	0	287	299
Montgomery, AL MSA	13.44	18.05	82	90
Muncie, IN MSA	0	0	288	300

MSA	*1990*	*2000*	*1990 rank*	*2000 rank*
Naples, FL MSA	21.84	22.52	29	61
Nashua, NH PMSA	15.91	23.39	69	55
Nashville, TN MSA	16.55	25.19	63	49
Nassau--Suffolk, NY PMSA	12.78	22.81	87	57
New Bedford, MA PMSA	0	0	290	302
New Haven--Meriden, CT PMSA	11.4	24.88	100	51
New London--Norwich, CT--RI MSA	0.07	3.36	206	209
New Orleans, LA MSA	8.96	12.11	124	126
New York, NY PMSA	15.43	4.13	71	202
Newark, NJ PMSA;	34.49	37.75	5	10
Newburgh, NY--PA PMSA	0	7.59	291	178
Norfolk--Virginia Beach--Newport News, VA--NC MSA	8.15	18.05	131	91
Oakland, CA PMSA	36.57	40.86	3	5
Ocala, FL MSA	5.64	0	147	234
Odessa--Midland, TX MSA	8.82	8.01	126	171
Oklahoma City, OK MSA	11.03	16.56	102	98
Olympia, WA PMSA	1.67	0	192	238
Omaha, NE--IA MSA	21.09	31.43	34	26
Orange County, CA PMSA	24.89	32.43	18	21
Orlando, FL MSA	14.43	19.36	76	81
Owensboro, KY MSA	0	6.17	292	190
Panama City, FL MSA	0	0	293	303
Parkersburg--Marietta, WV--OH MSA	0	0	294	304
Pensacola, FL MSA	0	0	295	305
Peoria--Pekin, IL MSA	5.48	10.26	151	148
Philadelphia, PA--NJ PMSA	13.76	24.31	80	52
Phoenix--Mesa, AZ MSA	18.94	32.52	46	19
Pine Bluff, AR MSA	0	0	296	306
Pittsburgh, PA MSA	12.74	9.61	88	155
Pittsfield, MA MSA	0	0	297	307
Pocatello, ID MSA	0	9.9	298	151
Portland, ME MSA	0.04	0	208	245
Portland--Vancouver, OR--WA PMSA	4.82	12.05	161	128
Portsmouth--Rochester, NH--ME PMSA	0	7.1	299	182
Providence--Fall River--Warwick, RI--MA MSA	3.79	5.79	173	192
Provo--Orem, UT MSA	2.82	15.5	186	105
Pueblo, CO MSA	10.75	9.22	104	156
Punta Gorda, FL MSA	0	0	300	308
Racine, WI PMSA	3.35	2.53	176	216
Raleigh--Durham--Chapel Hill, NC MSA	15.55	26.96	70	41

MSA	*1990*	*2000*	*1990 rank*	*2000 rank*
Reading, PA MSA	0	0	302	310
Redding, CA MSA	0	0	303	311
Reno, NV MSA	21.59	29.17	31	34
Richland--Kennewick--Pasco, WA MSA	14.9	27.68	73	39
Richmond--Petersburg, VA MSA	16.5	23.15	64	56
Riverside--San Bernardino, CA PMSA	9.66	12.95	111	123
Roanoke, VA MSA	0.04	10.28	209	147
Rochester, MN MSA	9.32	28.31	117	36
Rochester, NY MSA	12.26	10.31	94	146
Rockford, IL MSA	9.19	9.82	118	153
Rocky Mount, NC MSA	0	7.96	304	173
Sacramento, CA PMSA	9.03	18.89	123	84
Saginaw--Bay City--Midland, MI MSA	12.37	9.2	92	157
Salem, OR PMSA	0	2.53	305	217
Salinas, CA MSA	21.48	18.93	32	83
Salt Lake City--Ogden, UT MSA	17.61	22.8	59	58
San Angelo, TX MSA	3.17	0	179	236
San Antonio, TX MSA	16.05	32.49	67	20
San Diego, CA MSA	9.66	18.01	112	92
San Francisco, CA PMSA	19.73	26.44	40	43
San Jose, CA PMSA	25.69	48.17	16	3
San Luis Obispo--Atascadero--Paso Robles, CA MSA	0	0	306	312
Santa Barbara--Santa Maria--Lompoc, CA MSA	13.47	16.24	81	99
Santa Cruz--Watsonville, CA PMSA	9.12	22.54	120	60
Santa Fe, NM MSA	22.24	19.87	25	78
Santa Rosa, CA PMSA	2.99	9.9	182	150
Sarasota--Bradenton, FL MSA	2.84	8.1	185	169
Savannah, GA MSA	11.89	11.71	97	131
Scranton--Wilkes-Barre--Hazleton, PA MSA	0	0.97	307	224
Seattle--Bellevue--Everett, WA PMSA	12.45	16.02	90	103
Sharon, PA MSA	0	0	308	313
Sheboygan, WI MSA	0	0	309	314
Sherman--Denison, TX MSA	0	0	310	315
Shreveport--Bossier City, LA MSA	7.17	12.08	137	127
Sioux City, IA--NE MSA	0	0	311	316
Sioux Falls, SD MSA	12.24	7.16	95	180
South Bend, IN MSA	18.72	22.38	48	62
Spokane, WA MSA	9.6	6.92	113	184
Springfield, IL MSA	12.45	29.69	91	33
Springfield, MA MSA	5.17	0.04	155	227

MSA	1990	2000	1990 rank	2000 rank
St. Cloud, MN MSA	0	0	312	317
St. Joseph, MO MSA	0	0	313	318
St. Louis, MO--IL MSA	21.76	25.44	30	46
Stamford--Norwalk, CT PMSA	53.61	57.31	1	1
State College, PA MSA	0	0	314	319
Steubenville--Weirton, OH--WV MSA	0	0	315	320
Stockton--Lodi, CA MSA	1.57	17.65	193	93
Sumter, SC MSA	0	0	316	321
Syracuse, NY MSA	6.95	7.82	139	175
Tacoma, WA PMSA	4.2	3.67	167	203
Tallahassee, FL MSA	33.99	13.38	7	117
Tampa--St. Petersburg--Clearwater, FL MSA	3.93	12.45	171	125
Terre Haute, IN MSA	0.14	0	203	244
Texarkana, TX--Texarkana, AR MSA	0	12.47	317	124
Toledo, OH MSA	9.56	11.5	114	133
Topeka, KS MSA	0.04	8.71	210	161
Trenton, NJ PMSA	21.17	37	33	11
Tucson, AZ MSA	10.48	21.64	108	64
Tulsa, OK MSA	19.35	20.62	43	70
Tuscaloosa, AL MSA	0.12	9.16	204	158
Tyler, TX MSA	5.64	4.19	148	201
Utica--Rome, NY MSA	0.09	0.02	205	229
Vallejo--Fairfield--Napa, CA PMSA	9.73	19.69	110	79
Ventura, CA PMSA	17.57	39.49	60	9
Victoria, TX MSA	0	16.77	318	97
Vineland--Millville--Bridgeton, NJ PMSA	0	0	319	322
Visalia--Tulare--Porterville, CA MSA	0	0	320	323
Waco, TX MSA	6.15	10.77	144	141
Washington, DC--MD--VA--WV PMSA	35.02	31.04	4	29
Waterbury, CT PMSA	6.02	7.88	145	174
Waterloo--Cedar Falls, IA MSA	0	0	321	324
Wausau, WI MSA	0	0	322	325
West Palm Beach--Boca Raton, FL MSA	17.26	22.37	61	63
Wheeling, WV--OH MSA	0	0	323	326
Wichita Falls, TX MSA	0	0	324	327
Wichita, KS MSA	18.74	20.57	47	71
Williamsport, PA MSA	0	0	325	328
Wilmington, NC MSA	0	2.91	326	213
Wilmington--Newark, DE--MD PMSA	19.51	24.94	42	50
Worcester, MA--CT PMSA	7.62	11.92	134	129

MSA	*1990*	*2000*	*1990 rank*	*2000 rank*
Yolo, CA PMSA	4.63	7.73	164	176
York, PA MSA	0	3.6	328	205
Youngstown--Warren, OH MSA	0	2.22	329	219
Yuba City, CA MSA	0	0	330	330
Yuma, AZ MSA	0	0	331	331