

**Do gated communities contribute to racial and economic residential  
segregation? The case of Phoenix\***

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## Abstract

The research question addressed in this paper is: Do gated communities contribute to the levels of racial and economic residential segregation? The case study is based on unique geographically referenced dataset for one metropolitan region in the United States, Phoenix, and employs segregation and spatial analyses. The second purpose of the study is to propose a new approach in studying the link between gated communities and residential segregation. The results clearly show that gated communities contribute to racial and economic residential segregation. There is also a statistically significant level of positive spatial autocorrelation with two implications: the proliferation of gated enclaves in one locale depends on their existence in the neighboring locales; and there is a clear pattern of spatial clustering, which shows that gated communities create new urban spaces of concentrated affluence and racial homogeneity.

## Introduction

Scholars of gated communities have often pointed to the links between the process of gating and the process of residential segregation (Blakely and Snyder, 1997; Caldeira, 2000; Webster, Glasze and Franz, 2002; Low, 2003; Blandy et al., 2003). However, specific empirical evidence of the relationship between the two processes has been only recently reported (Le Goix, 2005; Vesselinov, 2008). Low's (2003) anthropological study, conducted in two gated communities (thereafter GCs), in San Antonio, TX, and in Queens, NY, shows that the main reason for moving into a GC is that many GC residents fear non-specified "others." Low argues that GCs residents are concerned about "ethnic change" in the neighborhoods they moved from and had covert concerns about social order, social control, xenophobia, ethnocentrism, and others. Self-segregation then seems to be an implicit purpose of gating, argues Low, which cannot be easily discovered in surveys for respondents' fear of not being "politically correct."

Le Goix (2003) studies GCs in the Los Angeles region (in seven counties) and uses the geographical concept of "discontinuity" to evaluate the social closeness of two adjacent spatial systems. According to the author's methodology, "discontinuity appears where a significant level of dissimilarity between two contiguous areas occurs." Le Goix concludes that GCs constitute more homogeneous and differentiated territories, which lead to an increase in segregation at the local scale. The author also points out that living in a GC is connected with age characteristics and age homogeneity, thus age is one of the most important factors of the integration between those living in a GC.

In another study, conducted again for the area of California, Gordon (2004) investigates the link between planned developments and residential segregation. Using data from the 1990 Summary Tape File 3A and public reports filed with the California Department of Real Estate, the author concludes that the planned developments are, on average, less diverse with respect to race, but more diverse in respect to income. Most recently Vesselinov (2008) studies the link between the process of gating and the process of segregation based on a national sample of the American Housing Survey data of 2001 and Census 2000. Based on the analyses, the author argues that the two forms of urban inequality work, to some extent, as alternatives of social and spatial exclusion. The term alternatives is used, because on

the one hand gating shares with segregation some of the same attributes of social exclusion: fears regarding increasing minority populations, crime and falling property values; the presence of homeowners associations to provide protective safety nets. On the other hand, GCs are spreading mostly in areas where segregation has traditionally had lower levels, and has declined in recent decades: in the West and the South regions of the U.S. Given this finding one can seriously question whether the average decline particularly in black/white segregation scores in recent decades and the lower segregation levels in the West and the South should be regarded as social progress.

Although there are some empirical evidence related to the link between GCs and segregation, clearly a lot of work is still ahead. This paper demonstrates one methodological approach of spatially identifying GCs and further investigation of whether or not they contribute to residential segregation. In my research so far I have used Low's definition of a GC and continue to believe that this definition serves the purposes of my research best: "[a] residential development surrounded by walls, fences, or earth banks covered with bushes and shrubs, with a secured entrance" (Low, 2003:12). The study addresses the question: Do gated communities contribute to the levels of racial and economic residential segregation in urban regions? The research is based on unique geographically referenced dataset for Phoenix. While this is a case study and as such not representative for urban America, the research reported in this paper can serve as a guide in studying all other metropolitan areas. The initial findings reported in the study also contribute to the better understanding of the gating process and its links to residential segregation.

## **Research Design**

**Data:** Using Geographical Information System (GIS) and MapQuest I identify the exact location of GCs in Phoenix, available through Thomas Bros. Maps. Then, I match the newly constructed data for GCs with Census data at block group level.<sup>1</sup> Using data from Census 2000 I then identify the characteristics of the population living within and outside of the gated areas.

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<sup>1</sup> In using Thomas Bros. Maps and merging the data with Census block groups, rather than blocks or tracts, I follow the work done by Renaud Le Goix in identifying GCs in Southern California (Le Goix, 2005).

## ***A GIS of gated communities:***

Data Sources: (1) Thomas Bros. Maps®. The company publishes interactive maps that identify gated streets. Access to vector maps allows spatial queries of gated streets, in order to identify gated neighborhoods. The files also contain information related to military bases, airfields, airports, prisons, amusement parks and colleges, some of which may also contain private streets with restricted access. (2) Aerial photographs (e.g. Google Earth, MapQuest). These tools also help to identify GCs and dismiss non residential gated areas (3) 2000 Census data, SF1 and SF3. The 100% file (SF1) is used for the population characteristics. The sample data file (SF3) is used for the income characteristics.

### ***Research Question: Do GCs contribute to racial and economic residential segregation in urban regions?***

This question is addressed by constructing series of two types of segregation indices: the Dissimilarity Index ( $D$ ) and the Entropy Index ( $H$ ), both based on block group level characteristics. In addition, I illustrate the spatial location of GCs and apply spatial analysis (LISA: Anselin, 1988). The analyses are conducted at block group level, because block groups come closest as geographic units to GCs (Le Goix, 2005). The average population of a census tract is 4,000, while an average population of a block group is 1,000. However, since there is no perfect overlap between all block groups and GCs I use four definitions of a “gated block group.” The definitions are based on estimating the percent of gated streets, where I sum the length of all gated streets and divide it by the length of all streets in each block group.

The first definition of “a gated block group” includes all block groups where I find GCs (for Phoenix MSA this measure yields 229 block groups out of 2,229). The second definition includes only the block groups where the percent gated streets falls one standard deviation above the MSA mean (in Phoenix it yields 103 block groups). The third definition will be based on a quotient measure, the ratio between the percent gated streets at the block group divided by the percent gated streets at the MSA level; “a gated block group” will have a score above 1 (which indicates overrepresentation; in Phoenix  $N=191$ ). The last measure is based on calculating the number of gated population in each block group, using the percent

gated streets. Then I calculate the MSA mean and designate gated block groups as those who fall 1 std. above the MSA mean (in Phoenix N=90). Therefore, I have four measures to work with and test the robustness of the results (sensitivity analysis).

## ***Segregation Analysis***

### Measures of Dependent Variables:

**(1)** Dissimilarity Index (D). This index is a classical measure of residential segregation (Massey and Denton, 1987) and it captures the evenness of the racial and ethnic distribution within sub-units (such as census tracts or block groups) as compared to the distribution within a larger geographic unit (e.g. metropolitan areas, cities, or suburbs). **(a)** Six indices will be constructed based on race, between: non-Hispanic whites and blacks; non-Hispanic whites and Hispanics; non-Hispanic whites and Asians; non-Hispanic blacks and Latinos; non-Hispanic blacks and Asians; and Latinos and Asians. **(b)** Six dissimilarity indices will be constructed based on income class, between: lower and middle, lower and upper, lower and affluent, middle and upper, middle and affluent, upper and affluent. Income class variable is based on family income; lower class: percent families with income below \$35,000; middle class: \$35,000-74,999; upper class: \$75,000-124,999; and affluent: above \$125,000.

**(2)** Entropy Index (H). This index is based on the above racial categories. Because of some well known disadvantages of D, such as relative dependence on the size of the sub-units and the fact that it can only be calculated for two different groups at a time (White, 1983), I also calculate the entropy index, known as multigroup version of Theil's H or the information theory index (Theil, 1972; Gordon, 2004; Iceland, 2004). The entropy index encompasses multiple ethnic groups (White, Glick and Kim, 2005) and is readily decomposed into "between" and "within" components (Theil, 1972). It is a measure of evenness and relates the diversity of a geographic area to the population-weighted average diversity of its constituent parts, measuring also how sub-units vary with respect to each other – another advantage compared to D (White, 1983).

Methods: **(1)** The metropolitan areas of interest are divided into two subsets: “gated block groups” and “non-gated block groups”. The segregation indices then are constructed for each of the two subsets comparing the gated block groups’ ethnic composition and the non-gated block groups’ ethnic composition to the metropolitan ethnic composition. **(2)** I calculate the entropy index using the division between gated block groups and non-gated block groups. This index is further decomposed into “between” and “within” components, measuring the share of segregation between gated block groups and non-gated block groups, the share of segregation among gated block groups, and the share of segregation among non-gated block groups. I further decompose this measure for cities, suburbs and municipalities within both.

### ***Location of GCs: Spatial Analysis***

Measures of the dependent variables: I use the first definition of “a gated block group,” which includes all block groups where GCs are found.

### Methods

1. Tests for global spatial autocorrelation using the Global Moran’s I statistic. The value of this statistic gives an idea of whether there is an overall pattern of spatial autocorrelation. The Global Moran’s I provides an indication of the extent to which the spatial pattern of the whole data set is compatible with a null hypothesis of randomness.
2. Moran Scatterplot Maps for each variable to examine possible clusters. The local Moran’s I, expressed in Moran Scatterplot Maps, helps in separating the existing levels of autocorrelation in four quadrants. The horizontal axis is expressed in standard deviation units for the specific variable under study ( $y$ ). The vertical axis represents the standardized spatial weighted average (average of the neighboring values, or spatial lag,  $Wy$ ) for the same variable. The slope of the linear regression ( $Wy$  on  $y$ ) through the scatterplot is the Moran’s I coefficient. On the scatterplot we can determine the areal unit (in this case tracts) location in one of the quadrants: high-high, low-low, high-low and low-high. The dynamic link

between the scatterplot and the map of the specific variable distribution by tracts helps us to visualize the specific clusters.

2a. In constructing the Moran Scatterplot Maps I also use the standardized scores of the gated variable. Standardization helps in reducing the effect of extreme observations and is also a preferred method when different geographic areas have to be compared (as will be the case in later studies).

## **Findings**

Table 1 shows the number of observations for all four different definitions of gated block groups in Phoenix. For comparative purposes, the table also includes Las Vegas and Seattle.<sup>2</sup> The first definition yields the highest number of gated block groups in all three metropolitan areas. Therefore, it seems that it will be indicative if the patterns found using the other three (more conservative) definitions correspond to the patterns yielded by using the first measure. The fourth definition yields the least number of gated block groups in Phoenix and Las Vegas, 90 and 69 respectively; while in Seattle the second definition yields the least number of gated block groups, 65.

### *Residential Segregation*

Table 2 shows the racial and ethnic composition of gated and non-gated block groups in Phoenix (and for illustrative purposes Las Vegas and Seattle are again included). Here only the first definition of gated block group is used, namely when a block group contains any percent of gated roads larger than zero. Even using this most “liberal” measure it can be observed that overall the gated block groups are much less racially and ethnically diverse compared to the non-gated block groups.

### *Results using the Dissimilarity Index*

Table 3 shows the dissimilarity indices calculated for the entire metropolitan area, then separately for gated block groups and non-gated block groups within each metropolitan area. The indices are also

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<sup>2</sup> Similar analyses were also conducted for Las Vegas and Seattle; contact the author for more information.

constructed following all four definitions of a “gated block group.” The analyses reveal that all four definitions lead to similar results; there are differences but overall the differences across the four definitions are not dramatic. Moreover, the majority of the dissimilarity indices for the gated block groups in all four definitions are lower compared to the indices for non-gated block groups. For example, the black-white segregation in Phoenix is 48.5 percent. The level of segregation in gated block groups varies only six percentage points, from 39 to 45 percent, and is lower compared to the level of segregation in non-gated block groups, which varies even less, from 47 to 48 percent. In addition, the level of segregation for the gated block groups is lower than the overall index for the metropolitan area. Similar is the case regarding Latino-white segregation, 54.7, which in Phoenix is higher than black-white segregation. The segregation in the gated block groups is lower than the overall segregation in the area and varies only four percentage points across definitions of gated block groups. The segregation within non-gated block groups is less than one percentage point and is higher than the segregation within gated block groups. Therefore, the results about racial residential segregation in Phoenix resemble the traditional division between central city and suburbs, where dissimilarity indices are usually lower in the suburbs and higher in the central city.

Table 4 shows the income class composition of gated and non-gated block groups in Phoenix (and Las Vegas and Seattle). Overall, the upper and affluent (upper, upper) classes are overrepresented in gated block groups compared to non-gated block groups. Table 5 presents the levels of economic segregation in Phoenix based on the Dissimilarity Index. The highest segregation score is between the lower and affluent classes, 67.6; the lowest score is between middle and upper classes, 31 percent. Similarly to racial residential segregation the economic residential segregation scores are lower in gated block groups compared to non-gated block groups throughout the table. This result is confirmed by applying all four classifications of gated block groups. This result also reminds me about the distinction between cities and suburbs, where suburban areas have not only been traditionally whiter, but also more affluent.

### *Results using the entropy index*

Since the dissimilarity index has some undesirable properties, like being influenced by the area's composition, I complement the segregation analysis by constructing the entropy index. Table 6 presents a decomposition of metropolitan racial segregation using the entropy index. As mentioned earlier the properties of this index are appealing because one, it is a multigroup index and gives us the opportunity to calculate segregation among all major groups, in this case among five groups: non-Hispanic whites, non-Hispanic blacks, Latinos, Asians and others. Secondly, the index can be decomposed to "within" and "between" components, in this case the components being within non-gated block groups, within gated block groups and between gated and non-gated block groups. In Table 6 the first row below the table header shows the total entropy in for the metropolitan area of Phoenix. The rows below show how the index is decomposed into within and between components for each of the four definitions of gated block groups.

In Phoenix the segregation within non-gated block groups explains the largest proportion of metropolitan segregation. Still, segregation within gated block groups, as well as between gated and non-gated block groups clearly contributes to the overall metropolitan segregation. In Phoenix, the total multigroup racial segregation is 0.227. Using the classification with the largest number of gated block groups (N=229), it can be seen that the segregation within the non-gated block groups accounts for 86.6 percent of the metropolitan segregation, the segregation within gated block groups accounts for another 6.3 percent and the segregation between gated and non-gated block groups for 7.1 percent. It is to be expected that segregation within GCs should be low, since the main premise on which most of these communities are built is racial and social homogeneity. As reported in the table, across all four definitions of gated block groups, the segregation within gated block groups is much lower compared to non-gated block groups, and also lower compared to the segregation between gated and non-gated block groups. Still, the combined effect of segregation within gated block groups and between gated and non-gated block groups explains between 6 and 13 percent of the metropolitan segregation, numbers

which cannot be ignored. Moreover, this finding clearly indicates that the presence of GCs contributes to racial residential segregation in Phoenix.

Table 6 also shows that entropy index based on income class. As seen in the case of racial residential segregation, the economic segregation within non-gated block groups explains the largest proportion of metropolitan economic segregation. Still, segregation within gated block groups, as well as between gated and non-gated block groups clearly contributes to the overall metropolitan segregation. In Phoenix, the total multigroup economic segregation is 0.157. Using the classification with the largest number of gated block groups (N=229), the class segregation within the non-gated block groups accounts for 76.5 percent of the metropolitan segregation, the segregation within gated block groups accounts for another 14.2 percent and the segregation between gated and non-gated block groups for 9.3 percent. Therefore, the presence of GCs in Phoenix explains about 23.5 percent, or almost a quarter, of the economic residential segregation in the metropolitan area. When the other three classifications of gated block groups are taken into account, it is clear that between 12 and 24 percent of the overall economic segregation in the metropolitan area can be attributed to the presence of GCs. Interestingly enough, the segregation within gated block groups explains a larger proportion of the metropolitan economic segregation compared to the proportion explained by the segregation between gated and non-gated block groups. In addition, a larger proportion of metropolitan economic segregation can be explained by the presence of GCs compared to the proportion of racial segregation explained by the same communities. Therefore, the results show that in Phoenix there is a larger segmentation (or diversity) within GCs based on income compared to race/ethnicity.

Although the racial and economic residential segregation in Phoenix can be mostly attributed to the segregation within the non-gated block groups, the presence of GCs does contribute to the overall segregation. Given that the two indices of segregation do not take into account spatial attributes, it is important to look at the location of GCs in Phoenix and study the evidence of spatial clustering.

### Location of GCs: Spatial Analyses.

Given that gated communities are present and increasing most of all in the south and the west regions of the U.S. (Sanchez, et al., 2005; Vesselinov, 2008) it is particularly instructive to look more closely at Western and Southern cities. Phoenix is one of these cities and Figure 1 shows the spatial distribution of gated block groups in Phoenix. The variable mapped is the percent of gated streets at each block group. The categories, which are included in the map are three: the block groups colored in gray correspond to non-gated block groups; the light pink category corresponds to those block groups, where the percent of gated streets is up to one standard deviation above the metropolitan mean; and the third category, in dark red, shows those block groups where the percent gated streets exceeds one standard deviation above the mean.

Figures 1a shows the Moran Significance Maps, based on the raw counts of the gated variable. Figures 1b shows the Moran Significance Maps, based on the standardized scores of the gated variable in each metropolitan area. The differences between Figures 1a and 1b are very minor, which further shows the stability of the results.

Each of the two Moran Significance Maps shows four types of categories: in bright red is the category, called “High-High;” in pink is the category “High-Low;” in light blue – the category “Low-Low;” and in dark blue the category “Low-High.” The most important category in our case is the “High-High” category, which shows that in each city there are several statistically significant clusters of gated block groups. What this means is that in each of these red block groups the percent of gated streets is statistically significantly higher than the metropolitan mean. The red also means that the high percent of gated streets in each block group depends on the percent of gated streets in the neighboring block groups.

Therefore, two important conclusions can be made. First, the diffusion of GCs resembles, at least to some extent, the spread of a contagious disease. The more GCs there are in one area, the more one would expect to find in close by areas. This finding is also supported by the coefficient of spatial

autocorrelation in each urban region, the Moran's  $I = 0.239$ , which is statistically significant at  $p < 0.001$ , and therefore indicates the presence of significant and positive spatial autocorrelation.<sup>3</sup>

Secondly, at least in Phoenix, GCs are producing new clusters of privilege and affluence, and also of racial and ethnic homogeneity. If similar results are found in other American cities it will mean that GCs could have profound effects in further increasing urban inequality and leading to more place polarization and uneven development.

## **Conclusion**

The research conducted in this study demonstrates one possible methodological approach towards spatially identifying GCs and applying sensitivity analyses in investigating whether or not GCs contribute to residential segregation. As the results show, in Phoenix metropolitan region GCs contribute to both racial and economic residential segregation. Employing a division between gated and non-gated block groups I find that the segregation within non-gated block groups explains most of the segregation in the metropolitan region. However, between 6 and 13 percent in the case of racial segregation and between 12 and 24 percent in the case of economic segregation can be attributed to the combined presence of GCs in Phoenix. Moreover, the proportion of the metropolitan segregation explained by the segregation within GCs is larger in the case of economic segregation (between 6 to 14 percent) compared to racial segregation (between 2 and 6 percent), which leads me to believe that the diversity within GCs is larger based on income compared to race/ethnicity. This finding also corresponds to the results reported by Gordon (2004) where less diversity was shown within planned neighborhoods based on race compared to income.

It is unreasonable to expect that GCs will be the main mechanism behind segregation, since residential segregation has been present in the American society for decades, at least as recorded by scholarly research. This study does not concern itself about whether or not the presence of GCs is a

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<sup>3</sup> When the six extreme observations were excluded for Phoenix, Moran's  $I$  increased to .304 while retaining its significance. The results are similar for Las Vegas and Seattle, request paper from the author.

cause for increased segregation. The specific causal mechanisms and reciprocal effects between gating and segregation are yet to be investigated. The study however, presents evidence that GCs contribute to the overall metropolitan segregation. What this research clearly demonstrates is that GCs account for some part of both racial and economic residential segregation in Phoenix metropolitan region. The initial analyses of spatial autocorrelation also show that the presence of GCs within a certain locale depend on the presence of GCs in the neighboring locales. There are statistically significant clusters of GCs in suburban Phoenix, which leads me to argue that GCs have formed specific larger areas of concentrated economic privilege and racial homogeneity.

The research results reported in this paper are preliminary. There is still a lot to learn about the mechanisms of selection into GCs, the structural effects these communities are having on urban America and about the specific links between the processes of gating and segregation. Further research should continue in order to assess the extent to which the patterns observed in Phoenix are common for other urban areas of the United States. The importance in continuing this research is related to the unusual prevalence of gated enclaves in California, Nevada, Florida, South Carolina and other parts of America. The spread of these communities has the potential of changing the urban landscape for centuries to come.

**Table 1. Gated Block Group Classifications: Number of Observations**

Gated Block Groups Classifications	Metropolitan Areas					
	Las Vegas		Phoenix		Seattle	
	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG
<i>Total BG</i>	832		2,229		2,630	
Gated1	223	609	229	2,000	154	2,476
Gated2	71	761	103	2,126	65	2,565
Gated3	158	674	191	2,038	146	2,484
Gated4	69	763	90	2,139	73	2,557

*Gated1. All block groups with gated roads are defined as gated block groups.*

*Gated 2. Gated block groups: the percent gated roads is one standard deviation above the metropolitan mean.*

*Gated 3. Gated block groups: the quotient (percent gated roads at BG divided by the mean) is higher than 1.*

*Gated 4. Gated block groups: the number of gated people is one standard deviation above the metropolitan mean.*

<sup>1</sup> *Gated block groups.*

<sup>2</sup> *Non-Gated block groups*

<sup>3</sup> *Block groups*

**Table 2. Racial Composition of Gated and Non-Gated Block Groups.**

Gated Block Groups (Gated1)	Metropolitan Areas					
	Las Vegas		Phoenix		Seattle	
	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG
	<i>N=223</i>	<i>N=609</i>	<i>N=229</i>	<i>N=2,000</i>	<i>N=154</i>	<i>N=2,476</i>
Percent White	72.82	59.67	80.64	63.11	81.37	76.31
Percent Black	6.57	8.95	2.23	3.68	3.63	4.57
Percent Latino	11.32	22.97	13.00	27.03	4.32	5.07
Percent Asian	5.64	4.53	2.01	2.15	5.75	8.90
Percent Other	3.55	3.78	2.11	3.93	4.93	5.15
Total Population	407,345	964,280	505,936	2,745,940	257,681	2,786,817
%	29.70	70.30	15.56	84.44	8.46	91.54

**Table 3. Indices of Dissimilarity**

Gated Block Groups Classifications	Phoenix											
	<i>Whites vs. Blacks</i>		<i>Whites vs. Latinos</i>		<i>Whites vs. Asians</i>		<i>Blacks vs. Latinos</i>		<i>Blacks vs. Asians</i>		<i>Latinos vs. Asians</i>	
	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG
	<i>D=48.5</i>		<i>D=54.7</i>		<i>D=35.3</i>		<i>D=36.8</i>		<i>D=47.8</i>		<i>D=57.1</i>	
Gated1	42.8	47.3	42.5	54.0	32.2	35.8	35.7	36.7	40.1	47.7	48.2	57.1
Gated2	40.4	48.1	41.7	54.2	35.3	35.3	33.9	36.8	33.1	47.9	43.0	57.0
Gated3	45.4	47.6	43.5	53.9	31.7	35.9	34.7	36.7	41.0	47.5	46.4	57.0
Gated4	39.0	48.0	39.8	54.1	34.3	35.4	32.4	36.8	30.3	47.8	40.5	56.9

**Table 4. Class Composition of Gated and Non-Gated Block Groups.**

Gated Block Groups (Gated1)	Metropolitan Areas					
	Las Vegas		Phoenix		Seattle	
	GBG <i>N=223</i>	Non-GBG <i>N=609</i>	GBG <i>N=229</i>	Non-GBG <i>N=2,000</i>	GBG <i>N=154</i>	Non-GBG <i>N=2,476</i>
Lower, < \$35,000	21.4	35.0	18.8	33.5	21.1	23.1
Middle, \$35,000-74,999	42.7	42.6	36.2	41.3	39.8	40.0
Upper, \$75,000-124,999	24.0	16.9	25.7	18.3	26.4	25.4
Affluent, \$125,000+	11.9	5.5	19.3	6.9	12.6	11.5

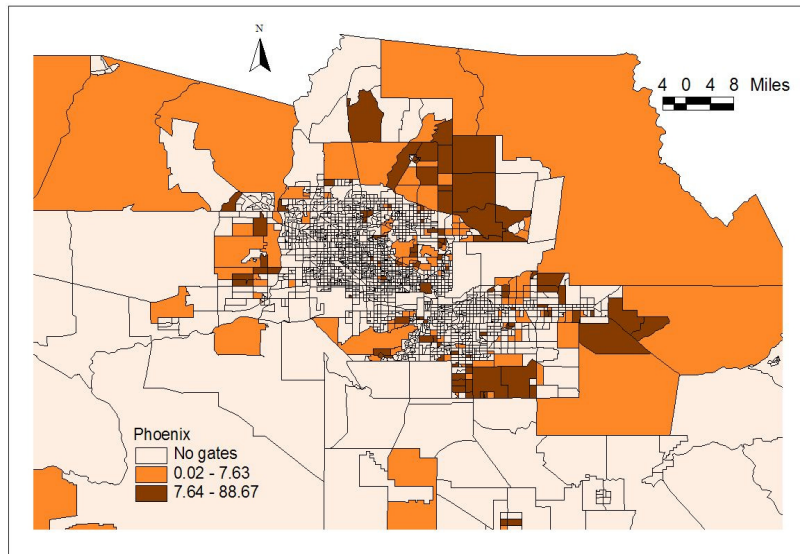
**Table 5. Index of dissimilarity (class).**

Gated Block Groups Classifications	Phoenix											
	<i>Lower vs. Middle</i>		<i>Lower vs. Upper</i>		<i>Lower vs. Affluent</i>		<i>Middle vs. Upper</i>		<i>Middle vs. Affluent</i>		<i>Upper vs. Affluent</i>	
	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG	GBG	Non-GBG
	<i>D=31.6</i>		<i>D=53.0</i>		<i>D=67.6</i>		<i>D=31.0</i>		<i>D=52.9</i>		<i>D=37.1</i>	
Gated1	25.5	31.7	40.8	53.1	56.3	66.2	25.0	31.5	48.0	50.9	31.0	36.8
Gated2	24.3	31.6	42.3	52.9	55.2	66.4	26.5	30.9	48.1	51.4	27.7	36.7
Gated3	26.5	31.6	41.3	52.7	54.9	65.9	24.9	31.1	46.6	50.7	29.9	36.8
Gated4	22.3	31.6	38.7	52.9	51.7	66.4	25.3	31.1	45.5	51.6	27.3	37.1

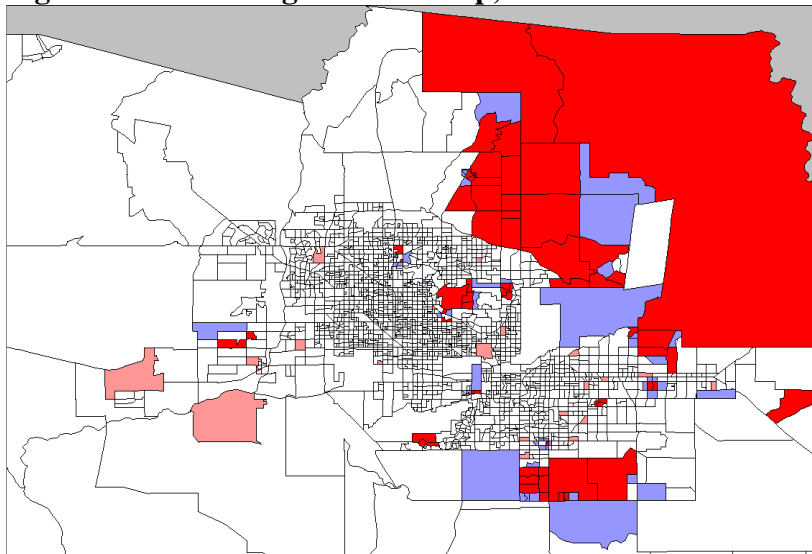
**Table 6. Decomposition of entropy measures of segregation.**

Gated Block Groups Classifications	Phoenix					
	Racial Segregation			Class Segregation		
	Within Non-GBG	Within GBG	Between GBG and Non-GBG	Within Non-GBG	Within GBG	Between GBG and Non-GBG
<i>Entropy (H)</i>	<i>H=0.227</i>			<i>H=0.157</i>		
Gated1	86.6	6.3	7.1	76.5	14.2	9.3
Gated2	93.9	2.1	4.0	87.8	6.5	5.7
Gated3	88.6	5.5	5.9	78.9	11.6	9.5
Gated4	93.2	2.1	4.7	87.2	6.3	6.5

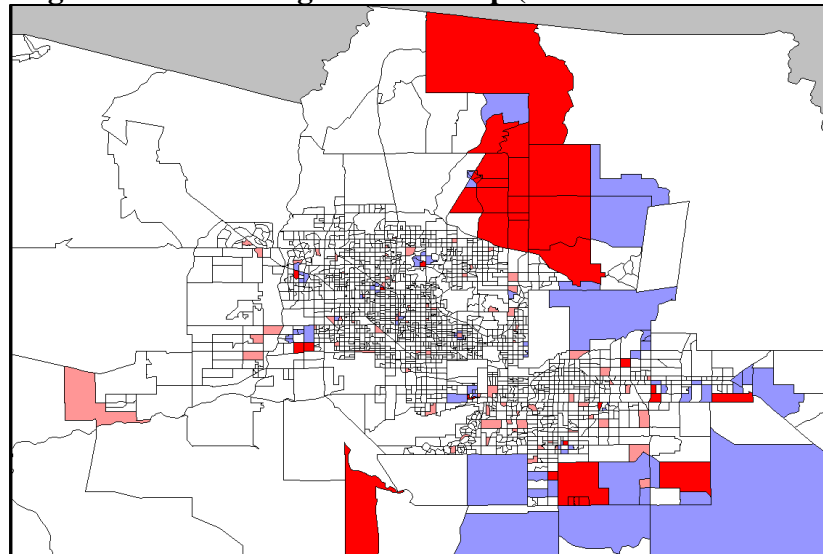
**Figure 1. Phoenix Metropolitan Area.**



**Figure 1a. Moran Significance Map, Moran's  $I=0.239$**



**Figure 1b. Moran Significance Map (standardized variable)**



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