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Ethnic Segregation in Arizona Charter Schools

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Abstract

Among the criticisms of charter schools is their potential to further stratify schools along ethnic and class lines. This study addressed whether Arizona charter schools are more ethnically segregated than traditional public schools. In 1996-97, Arizona had nearly one in four of all charter schools in the United States. The analysis involved a series of comparisons between the ethnic compositions of adjacent charter and public schools in Arizona's most populated region and its rural towns. This methodology differed from the approach of many evaluations of charter schools and ethnic stratification in that it incorporated the use of geographic maps to compare schools' ethnic make-ups. The ethnic compositions of 55 urban and 57 rural charter schools were inspected relative to their traditional public school neighbors.

Nearly half of the charter schools exhibited evidence of substantial ethnic separation. Arizona charter schools not only contained a greater proportion of White students, but when comparable nearby traditional public schools were used for comparison, the charters were typically 20 percentage points higher in White enrollment than the other publics. Moreover, the charter schools that had a majority of ethnic minority students enrolled in them tended to be either vocational secondary schools that do not lead to college or "schools of last resort" for students being expelled from the traditional public schools. The degree of ethnic separation in Arizona schools is large enough and consistent enough to warrant concern among education policymakers.

Introduction

School choice arguably has become the most significant education policy issue of this decade. Choice programs such as vouchers, charter schools, open enrollment, and tuition tax credits continue to be discussed and debated at all levels of government and society. Charter schools are clearly at the forefront of the school choice movement, enjoying widespread public and legislative approval. Indeed, as of June 1998, 32 states have enacted legislation permitting the establishment of publicly funded charter schools.

Among the criticisms of school choice programs, and hence, charter schools, is their potential to further stratify schools along racial, socioeconomic, and other class-based lines (see e.g., Corwin & Flaherty, 1995; Elmore, 1987; O'Neil, 1996; Wells, 1993; Wells & Crain, 1992; Willms, 1986;). For instance, numerous commentators have expressed concern that charter schools will "skim" predominantly White, privileged students from public schools (see e.g., Buechler, 1996; Elmore, 1986; Fitzgerald, Harris, Huidekoper & Mani, 1998; Lee & Croninger, 1994; Wells, 1993). Were this to be true, charter schools could be found culpable of contributing to the re-segregation of America's schools. It is similarly plausible that charter schools could "cream" students of color, resulting in ethnically concentrated schools of choice. Given the novelty of charter schools and obstacles to obtaining relevant data, few empirical analyses have addressed these matters.

Proponents of charter schools consistently report that charters serve a proportionate (or sometimes higher) percentage of minority students in comparison to traditional public schools. Opponents say these data fly in the face of common sense-- that parents will tend to choose schools that predominantly serve children from backgrounds and class orientations similar to their own.

This study addresses two major questions within the context of ethnic stratification. First, is there evidence that charter schools are "skimming" White students? And second, are Arizona charter schools more ethnically concentrated than traditional public schools? The answers to these questions will help determine more generally if Arizona charter legislation (A.R.S. § 15-181) has resulted in increased ethnic segregation among its publicly funded schools.

Related Literature

Charter Schools and Ethnic Stratification

Several major charter school evaluations and policy reports concluded that the ethnic compositions of charter schools are in line with those of traditional public schools. Buechler (1996) reviewed various surveys, newspaper and magazine articles, research reports, and policy briefs from across the nation in compiling the 1996 report *Charter Schools: Legislation and Results after Four Years*. He summarized:

> As a group, the schools serve a student population comparable to the overall public school population in terms of race and socioeconomic status--not an elite population of upper-middle-class white students, as some had feared. Indeed, many charter schools have been designed explicitly to serve at-risk students. .... If anything, charter schools serve a more underprivileged student population than regular public schools do. (Buechler, 1996, pp. 26-27)

A Study of Charter Schools: First-Year Report, a comprehensive national evaluation sponsored by the U.S. Department of Education Office of Educational Research and Improvement, reported similar findings: "Charter schools have, in most states, a racial composition similar to statewide averages or have a higher proportion of students of color" (U.S. Department of Education, 1997, p. 24). This conclusion was based on state-by-state enrollment comparisons between a total of 214 charter schools and 21,656 public schools in ten states. Data were collected from the 1993-94 National Center for Education Statistics Common Core of Data. Charter schools in Michigan, Minnesota and Massachusetts served a higher percentage of predominantly (i.e., greater than 80%) minority students than did public schools. In contrast, charters in Arizona, California and Colorado enrolled a higher percentage of White (i.e., greater than 80%) students than did public schools. Overall, 95 of the 214 (44.4%) charter schools in the sample served student populations that were at least 80% White, while 45 charters (21.0%) enrolled student populations that were at least 80% minority.

On behalf of the Colorado Department of Education, the Clayton Foundation evaluated 24 Colorado charter schools in 1997 (Fitzgerald et al., 1998). Evaluators compared the percentages of students of color enrolled in charter schools with those of their sponsoring districts. Five charter schools out of the 24 served roughly (plus or minus two percentage points) the same percentage of students of color as their sponsoring districts. Four charters served a greater percentage of students of color than their sponsoring districts. In only one instance did the percentage of students of color (0.0%) served by the charter fall outside the range of percentages for district schools. The report concluded that, overall, charters enrolled racially diverse student populations.

Southwest Regional Laboratory published *Freedom and Innovation in California's Charter Schools* in the Fall of 1995. Surveying 54 of the 66 operating charter schools in California, evaluators asked administrators to estimate the percentages of racial and ethnic minorities that their schools served. To establish a comparison group, administrators were also asked to name nearby public schools that their students would have most likely attended had they not attended their charter school. Of the 83 public comparison schools identified by charter school administrators, 46 returned surveys that contained information on student characteristics. A comparison of the enrollments between charter schools and public schools

led the evaluators to conclude that "the data do not support the hypothesis that charter schools are less racially balanced than nearby comparison schools" (Corwin & Flaherty, 1995, p. 112). Almost half of both the samples exhibited student populations comprising 50% or greater minorities. Further, only one in five charter schools served less than 20% minorities, an amount consistent with the comparison group.

An evaluation of Texas charter schools provided evidence of ethnic clustering (Taebel et al., 1997). Of the 17 charter schools in the study, nine were 90% or higher ethnic minority. Eight of these had curricula designed to serve at-risk students. The non-at-risk schools enrolled over three-fourths of all White students served by the charter cohort.

Exclusionary Admissions Practices

There is some concern that selective admissions policies could contribute to racial imbalances among schools. The Colorado Department of Education (Fitzgerald et al., 1998) found no evidence, at least "on the surface," of exclusionary practices. All, save for one, of the 24 charter schools in the study used some random process, such as a lottery, or a first-come-first-served policy to admit students. The lone exception was the Stargate Charter School, which targeted gifted and talented students. For students qualifying as intellectually or academically gifted, the school allocated the first 100 seats--with reserved race and gender slots based on district percentages--on a first-come-first-served basis. The remaining 50 seats were allocated by lottery. Interestingly, Stargate enrolled 12% students of color in a district with schools that ranged from a low of 12% to a high of 60% minority enrollment.

Fieldworkers for the U.S. Department of Education (1997) conducted several telephone surveys, site interviews, and focus groups with charter school directors. Of those surveyed by phone, nearly three-quarters indicated that applications for admission exceeded capacity. For those schools with waiting lists, 39% reported using some random selection process, 41% employed a first-come-first-served policy, 10% used some combination of these policies, and the remaining 10% used some "other" [emphasis in the original] process. Although the evaluators did not find evidence of explicit discriminatory admissions practices, they remarked in an endnote:

> More subtle processes of selecting students, however, may be at work. Intensive field research in subsequent years should allow us to probe deeper into selection processes. For example, we will want to ask, in situations where it is possible, whether charter schools actively seek out students from diverse ethnic or racial backgrounds. The research team documented several cases where the schools do reach out actively, but we cannot report definitive data at this time. (U.S. Department of Education, 1997, p. 47)

Nine of seventeen Texas charter schools exhibited acute cases of racial distinctiveness (Taebel et al., 1997). Evaluators attributed the enrollment imbalance to four factors, two of which were a first-come-first-served admissions policy and word-of-mouth marketing. Indeed, parents cited word-of- mouth as the most influential form of advertising. The evaluators commented:

> While it is reassuring to know that parents share such information with one another, there is a danger of exclusion when recruitment is a function of whom you know.

> "Friend or relative" communication networks also tend to be homogeneous with respect to race and class. Relying solely on this kind of communications for student recruitment means that those who come first may be racially and socioeconomically similar to the existing student body. (p. 97)

It is not uncommon for charter schools to require parents to sign formal "involvement" agreements to participate in their child's instructional programs. Such contracts have the potential to serve as sorting mechanisms, excluding parents who may be willing but are practically unable to fulfill such commitments. Corwin and Flaherty (1995) noted poignantly, "Although charter schools were created to allow parents greater choice in the kinds of schools their children attend, parent contracts seem to give schools greater choice over the kinds of parents they choose to serve" (p. 105).

Becker, Nakagawa, and Corwin (1995) asked 28 charter school administrators in California what factors they considered in accepting new students. Twenty-five percent indicated that an "essential" determinant was that the "parent or guardian will participate in requested ways" (p. 18). From their original sample of 34 charter schools, 27 (79%) reported using parent involvement contracts.

Methodological Issues

Many of the national policy reports and evaluations lack the sophistication and rigor necessary to draw valid conclusions about the possible segregating effect of charter schools. In the first, there is great risk in making sweeping statements about charter schools given the variability in state charter school laws. Some states carefully regulate the admissions process while others do not. States also differ widely in terms of the restrictions on the number and types of charters to be awarded. For example, legislation in over a third of the charter states either encourages or requires a portion of charter schools to appeal to the needs of at-risk youth (Buechler, 1996).

Second, data aggregated at the state and even district level mask variation among schools. For instance, the U.S. Department of Education (1997) reported that in 1995-96, Arizona charter schools served 20.2% Hispanic students while the public schools served 27.6%. These aggregated data cannot speak to the variability in the percentage of Hispanics served within either segment. Several charter and public schools in Arizona are ethnically concentrated, but this information is shrouded in grossly aggregated statistics.

Finally, difficulty in obtaining accurate data is a common complaint among charter school researchers. This is not altogether surprising, as by design one of the major advantages of charter schools is to free them from burdensome record keeping responsibilities. For example, Corwin and Flaherty (1995) asked traditional public and charter school administrators to estimate the percent of minorities that their school enrolled within very broad ranges (i.e., between 0-19%, 20-49%). Obviously, imperfect data attenuate the strength of evaluators' conclusions.

School Choice and Social Stratification

Given the dearth of empirical studies that address charter schools and ethnic stratification, the literature review was broadened to include studies on school choice and social stratification. Considerably more research has been conducted in this area.

Since the United Kingdom passed public school choice legislation in 1980, it has served as the focus for many studies on parental choice (Willms, 1996). Adler, Petch, and Tweedie (1989) asked over 600 parents in Scotland to identify their criteria for choosing a school. They found that few parents emphasized educational considerations, such as curriculum or test results. Instead, their main reasons for choosing a school were based on social factors, such as school climate and general reputation, as well as with practical issues, such as proximity.

Witte (1993) interviewed 171 parents who participated in the Milwaukee Choice Program in 1991. Although the most emphasized criteria for selecting a school was perceived educational quality, 75% of the parents considered the "other children in chosen school" to be an important or very important factor in their decision. Incidentally, 80% deemed location of chosen school important or very important.

Based on a nationally-representative sample of secondary students in the U.K., Echols, McPherson, and Willms (1990) reported that choice schools tended to serve populations of above average socioeconomic class. In addition, those parents who exercised choice were relatively more educated and belonged to a higher social class. Willms (1996) conducted a more sophisticated longitudinal analysis to investigate the extent to which Scottish communities had become socially segregated. He reported that "there was clearly greater propensity to exercise choice among higher social class and better educated parents" (p. 142) and that "parents choosing within the state sector disproportionately chose schools with higher mean SES than other state-sector schools" (p. 143).

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A two-year study on school choice programs in New York, Philadelphia, Boston and Chicago revealed that minority students and students from low-income families were underrepresented by choice schools with selective admissions policies (Moore & Davenport, 1990). The authors reported:

> In these school systems, school choice has, by and large, become a new improved method of student sorting, in which schools pick and choose among students. In this sorting process, black and Hispanic students, low-income students, students with low achievement, students with absence and behavior problems, handicapped students, and limited-English- proficient students have very limited opportunities to

participate in popular-options high schools and programs. Rather, students at risk are disproportionately concentrated in schools where their fellow students are minority, low-income, and have a variety of learning problems. (p. 188)

Methods

Data Sources

October enrollment data disaggregated by race and ethnicity, gender, and grade level for the years 1994-1997 were obtained from the Arizona Department of Education (ADE) School Finance Division for all public elementary and secondary schools in Arizona. The same data were acquired from the ADE for charter schools for the years 1995-1997. Enrollment figures in these schools comprise the entire corpus of data.

All public schools, including charter schools, are required to report October 1 enrollments by race and ethnicity, gender, and grade level (John Eickman, personal communication, May 26, 1998). The racial and ethnic codes used by the ADE are White, Black, Hispanic, American Indian or Alaskan Native, and Asian or Pacific Islander.

The ADE collected October enrollment data from 51 charter school sites in 1995 (charter schools' inaugural year), 132 in 1996, and 137 in 1997. Although one would assume that the number of charter schools reporting enrollment data would represent the total number of operating charters for that year, this is not the case. Conversations with several members of the ADE failed to confirm precise numbers of operating charter schools. Charter schools open and close during the year, and do not necessarily open in the year that they are granted, thus making it difficult to maintain exact numbers of operating charters. Best estimates from ADE dated lists of charter schools are displayed in Table 1.

Table 1
Number of Charters Reporting Enrollment Data and Estimated Number of Operating Charters

Year	No. Reporting Data	Est. No. Operating
1995	51	51
1996	132	135
1997	137	215

Most notable are the October enrollment data submitted by charter schools for 1997, which deviate substantially from the often reported 240 to 260 operating charter schools in the third year of their existence. (The 1997 October enrollment data were collected by the ADE as late as May 15, 1998, which allowed sufficient time for schools to report. The ADE Charter Schools Handbook mandates that all schools report these data by October 31 of each year.) To obtain the number of operating charter schools in the 1997-98 school year, a team of researchers (the author, Gregg Garn and Linda Brock-Nelson) queried the 250 charter schools listed by the ADE as of March 23, 1998. Results indicated that at most 215 charter schools were in operation in the Spring of 1998. Thus, 1997-98 charter school enrollment data used here represents roughly two-thirds of the population of operating charter schools.

Schools not classified as regular public schools (e.g., accommodation schools, vocational and technical schools not operated by public school districts, and the like) were removed from the analysis. For instance, 34 of these non-traditional schools that served 6,100 students were eliminated from the 1996 data set.

Digital map data of metropolitan Phoenix street grids, census tracts, and zip code boundaries were acquired from the data archives of the Arizona State University Geographic Information Systems (GIS) Laboratory. Site addresses of charter and traditional public schools were obtained from the ADE School Finance Division. In those instances where addresses were absent or in a form that did not indicate geographic location, the ADE School Report Card website (http://sais.ade.state.az.us/rcweb/) or direct inquiries to schools provided street addresses. In all, 586 addresses were geocoded onto a digital map using Arcview. Initially, about three-fourths of the addresses were successfully matched by Arcview. The remaining 136 addresses were manually plotted by reference to the 1998 edition of the *Phoenix Metropolitan Street Atlas*. Lastly, selected census data were acquired from the Maricopa Association of Governments (MAG). These data were collected by MAG as part of the 1995 Special Census of Maricopa County.

Procedures

ADE October enrollments for the years 1995-1997 were aggregated by year for all schools. First, ethnic distributions were compared between charter and traditional public schools. Then, for reasons explained later, comparisons were made after removing reservation charter schools.

The remainder (to be sure, the core) of the analysis involved a series of comparisons between the ethnic compositions of adjacent charter and public schools in Arizona's most populated region and its rural towns. This methodology differs from the approach of many evaluations of charter schools and racial stratification in two major respects. First, it examines the potential for ethnic separation at the disaggregated level of school. Second, for half of the charter schools, explicit comparisons are made within the context of geographic maps.

To see the ethnic separation in Arizona charter schools, one must examine the geography of the situation. The crucial question is not what percents of ethnic groups either are or are not in charter schools; rather, the crucial question is how are ethnic groups distributed between propinquitous charter and traditional public schools. This question is addressed differently in small rural places and in large metropolitan areas. In the former, because attendance catchment areas are small, it is sufficient merely to list small towns that have charter schools and compare their ethnic composition to the traditional public school or schools in the same town. In the case of large metropolitan areas, it is necessary to plot actual maps of these areas and inspect the ethnic distributions of adjacent charter and traditional public schools.

Attempts to depict the magnitude of differences among schools' ethnic compositions while holding constant size and grade level through various statistical measures prove problematic. Popular measures of level of segregation, such as the Dissimilarity Index, and measures of equity, such as the Gini coefficient or Lorenz Curve, are highly sensitive to numbers of students in schools. The relative smallness of charter schools makes comparisons via these types of measures questionable. Moreover, within this context, these indices are simply powerless to detect between-school segregation. No statistical technique

can aptly discern differences among urban schools as completely as maps.

These analyses are exploratory (Tukey, 1977), not confirmatory. It is impossible in advance of studying these data in detail to specify individual "hypotheses" to test. Hence the exploratory nature of these analyses. There are no significance tests here simply because there is no sampling of a probabilistic sort that could give meaning to any probabilistic inferences. Absent also are correlational techniques such as multiple regression analysis, which decontextualize the data and do not provide adequate means to detect the existence of a phenomenon, if it exists; further, they are difficult for laypersons to interpret.

Map Analysis of Urban Charter Schools

Using Arcview, pertinent Arcview coverage and shape files, and ADE school address data, charter and traditional public schools were plotted onto a digital map of metropolitan Phoenix. Each school was virtually linked to 1996 October enrollment data. The 1997 data were not plotted because they were not available at the time, and even so, were not nearly as complete as the 1996 data.

Data were available for 55 charter and 518 traditional public schools in metropolitan Phoenix. Metropolitan Phoenix accounts for nearly 60% of Arizona's population. In the Fall of 1996, metropolitan Phoenix was home to about half (47%) of the 132 charter schools in the state.

Arizona is demographically unique in that two urban centers account for the majority of its populace. Metropolitan Phoenix and the city of Tucson comprise over three-fourths of the state's population. In the interest of time, and considering that metropolitan Phoenix is over three times as populated as Tucson and is home to far more charter schools, Tucson was excluded from the analysis.

The exploratory nature of the map analysis ultimately led to a systematic approach with which to search for ethnic separation. The ethnic composition of every charter school in metropolitan Phoenix was compared to that of nearby traditional public schools of comparable grade levels. This spatial analysis was done using maps that ranged in coverage from 5 to 28 square miles. In some areas, multiple charter and multiple public schools coexisted. In others, a single charter school was located in the vicinity of five or six public schools. Judgments were made as to the presence and degree of ethnic separation primarily on the basis of the magnitude of difference in the proportion of White students enrolled. Typically, occurrences of ethnic separation were documented in instances where the magnitude of difference was 15% or greater. Multiple schools of various sizes, grade levels, distances apart, and ethnic distributions complicated matters, but were factors all of which were carefully considered. The nature of "nearby" is what remains to be unpacked and will surely be contested by those who advance other explanations of the findings discovered here. Judging whether a traditional public school is "nearby" a charter school and hence may serve as a comparison of enrollment data is a complex judgment not captured simply by geographic distance (i.e., miles separation), school district boundaries or other obvious and easily specified criteria. For example, canals, cultural factors like the fact that Mesa is Mormon in many areas, sections of cities isolated by freeways or mountains, and differences in population densities must be simultaneously considered when making these judgments.

For the most part, the analysis relied on the maps prima facie. But there is doubtless a story behind each picture that could not be told here. Given the large number of charters addressed by this study, it seemed unreasonable to try to account for all potential alternative

hypotheses (that is, alternative to attributing ethnic separation to a charter school). In ambiguous instances or otherwise where deemed useful, additional information was provided to supplement the face value information provided by the maps. Certainly, the core of the analysis was spatially and numerically based, but where applicable, ancillary evidence provided further explanation.

The map analysis spawned a less comprehensive but more clearly specifiable and readily interpretable matched comparison analysis. The nearest public school or schools, again of comparable grade level, were matched with each charter school. The geographically related comparison group was chosen in preference to a random sample of public schools in Maricopa County because it controls, in effect, for geographic location and ethnic composition of the immediate region. Indeed, a random sample would not be prudent because charter schools do not locate under the same conditions that traditional public schools do. In those cases where the grade range of a charter school was not mirrored by a nearby public school, public schools that "covered" the grade levels were combined. For example, for a K-12 charter school, the nearest K-5, 6-8, and 9-12 public schools collectively served as the matched comparison. In all, the ethnic distributions of 55 matched pairs were inspected. In addition, charter and public comparison schools were grouped into three categories: schools below 30% White, over 70% White, and in between 30-70% White.

Lastly, mere surface level exploration of the data raised suspicion of a relationship between the educational mission of charters and their ethnic make-up. This triggered the categorization of secondary level charters into either college prep or voc-ed programs. Classifications were primarily based on self-described school missions, organizations and philosophies, and instructional programs found in the 1996 online ADE School Report Cards (http://sais.ade.state.az.us/rcweb/). Descriptors such as "at-risk," "school-to-work," and "tech-prep" placed schools in the voc-ed category. Indicators of a more mainstream or college-bound program (e.g., "academic college preparatory," "college prep," or "accelerated learning") designated schools as college prep.

Analysis of Small Town Charter Schools

The rural data are inclusive of small towns that contain public schools and at least one charter school. This straightforward analysis compared charter schools to traditional public schools of the same grade level. Additionally, the analysis that explored the relationship between educational program and ethnic composition among urban charters was repeated for the rural cohort. A total of 57 rural charter and 88 public schools (which included several reservation schools) from 36 rural Arizona towns was examined.

In sum, the ethnic compositions of 55 urban and 57 rural charter schools were inspected relative to their traditional public school neighbors.

Results

Tables 2-4 present aggregated ethnic distributions of charter and traditional public schools for the years 1995-1997. Across all years, charter schools enrolled a considerably higher proportion of Black students than traditional public schools. In contrast, Hispanic students were significantly underrepresented in charter schools. For instance, in 1996, Hispanic students participated in charter schools at half the rate at which they participated in traditional public schools. That same year witnessed a three-fold increase in American Indian

charter school participation over their presence in traditional public schools. This is commented on below. Also notable are the percentages of White students served by charter and traditional public schools, which differed only marginally for the first two years. By the third year of their operation, however, charter schools enrolled a higher percentage of White students than the traditional public schools. (An important caveat: it should be noted once again that for reasons unknown the charter school enrollment data for 1997 were much less complete than for the prior years.)

Table 2
1995 Ethnic Compositions of Arizona Schools

	Trad. Public Students (n=1159)		Charter Students (n=51)	
Ethnicity	**No.**	**%**	**No.**	**%**
White	434,473	57.6%	3,718	59.9%
Black	31,132	4.1%	631	10.2%
Hispanic	222,751	29.5%	1,215	19.6%
Am. Indian	52,868	7.0%	564	9.1%
Asian	12,957	1.7%	79	1.3%
All	754,181	100.0%	6,207	100.0%

Note. Due to rounding, percents do not sum exactly to 100.0%

Table 3
1996 Ethnic Compositions of Arizona Schools

	Trad. Public Students (n=1148)		Charter Students (n=132)	
Ethnicity	**No.**	**%**	**No.**	**%**
White	440,894	56.8%	9,776	55.2%
Black	32,264	4.2%	1,251	7.1%
Hispanic	236,475	30.4%	2,919	16.5%
Am. Indian	53,527	6.9%	3,567	20.1%
Asian	13,712	1.8%	213	1.2%
All	776,872	100.0%	17,726	100.0%

Note. Due to rounding, percents do not sum exactly to 100.0%

Table 4
1997 Ethnic Compositions of Arizona Schools

	Trad. Public Students (n=1181)		Charter Students (n=135)	
Ethnicity	**No.**	**%**	**No.**	**%**
White	440,887	55.9%	11,804	61.4%
Black	33,521	4.3%	1,176	6.1%
Hispanic	245,528	31.1%	3,442	17.9%
Am. Indian	53,905	6.8%	2,484	12.9%
Asian	14,461	1.8%	307	1.6%
All	788,302	100.0%	19,213	100.0%

Note. Due to rounding, percents do not sum exactly to 100.0%

Some questions have been raised about the nature of charter schools on American Indian reservations. Nearly all of them are converted from erstwhile reservation schools that were formerly funded by BIA or other federal programs. Given their geographic isolation and virtually unchanged condition, reservation charter schools do not offer genuine educational alternatives for students in those communities.

If the reservation schools are removed from Tables 2-4 (i.e., if all schools for which the American Indian percent of students is 93% or greater are taken out) the data are even more revealing of the segregation trend emerging in the charter schools. For 1996, the difference in the percentage of White students attending charter and traditional public schools widened nearly ten-fold after removing the reservation schools (see Tables 3 and 6). For 1997, the difference nearly doubled (see Tables 4 and 7).

Table 5
1995 Ethnic Compositions of Arizona Schools with Reservation Schools Removed

	Trad. Public Students (n=1105)		Charter Students (n=50)	
Ethnicity	**No.**	**%**	**No.**	**%**
White	434,074	59.6%	3,718	64.8%
Black	31,117	4.3%	631	11.0%
Hispanic	222,675	30.6%	1,215	21.2%
Am. Indian	27,543	3.8%	91	1.6%
Asian	12,928	1.8%	79	1.4%
All	728,337	100.0%	5,734	100.0%

Note. Due to rounding, percents do not sum exactly to 100.0%

Table 6
1996 Ethnic Compositions of Arizona Schools with Reservation Schools Removed

	Trad. Public Students (n=1092)		Charter Students (n=124)	
Ethnicity	**No.**	**%**	**No.**	**%**
White	440,519	58.7%	9,760	67.0%
Black	32,250	4.3%	1,248	8.6%
Hispanic	236,409	31.5%	2,916	20.0%
Am. Indian	27,202	3.6%	446	3.1%
Asian	13,683	1.8%	208	1.4%
All	750,063	100.0%	14,578	100.0%

Note. Due to rounding, percents do not sum exactly to 100.0%

Table 7
1997 Ethnic Compositions of Arizona Schools with Reservation Schools Removed

	Trad. Public Students (n=1124)		Charter Students (n=129)	
Ethnicity	**No.**	**%**	**No.**	**%**
White	440,521	57.8%	11,792	68.4%
Black	33,511	4.4%	1,176	6.8%
Hispanic	245,453	32.2%	3,440	19.9%
Am. Indian	28,068	3.7%	533	3.1%
Asian	14,441	1.9%	304	1.8%
All	761,994	100.0%	17,245	100.0%

Note. Due to rounding, percents do not sum exactly to 100.0%

Finally, not only are the charter schools disproportionately White, the trend to become even more White can be seen by inspecting all three years' data (see Table 8). (Once again, the 1997 data should be interpreted with caution as these are curiously incomplete.)

Table 8
Percent White Students in Charters
(Excluding Reservation Schools)

Year	% White
1995	64.8%
1996	67.0%
1997	68.4%

Aggregated data, like those presented above, are powerless to illuminate potential ethnic separation at the level of school. For instance, in 1996, well over half (56.3%) of the Black students attending charter schools were served by just three schools. As the data are explored even more (here, and in subsequent analyses), the trend toward ethnic stratification becomes clearer. The map and small town analyses provide the best opportunity for discovering ethnic separation in urban and rural communities if it exists.

Maps of Urban Charter Schools

Nineteen maps (Figures 1-19) of sections of metropolitan Phoenix contain 34 different charter and 128 different traditional public schools. The maps averaged a charter-to-traditional school ratio of 1:5.2. Together, they covered 220 non-duplicated square miles in six cities.

The maps are rich with information, conveying spatial relationships among schools and unique geographic properties such as canals, rivers, and major streets and highways. They include the following school information: proportion of White students (in three instances the proportion of Black students), name, size, and approximate grade level. Most cases permitted grade level comparisons. Finally, though not every charter school on the following maps is implicated, every map provides evidence of ethnic separation on the part of a charter or charter schools.

Figure 1 displays three proximal Villa Montessori charter schools that collectively enrolled over 300 students. The Main and Meadowbrook Campuses are converted private schools and have been in operation for 30 and 7 years, respectively. The Campbell Campus opened as a charter school in 1996. The neighborhood that surrounds the three charter schools consists of a mix of lower to middle class residential homes.

Interestingly, and paradoxically in view of Montessori School origins in the slums of Rome, Italy, (and in view of the 1993 position statement of the American Montessori Society that a Montessori classroom must have a "heterogeneous group of students"[http://www.seattleu.edu/~jcm/montessori/key_concepts.html]), these schools served predominantly White populations in an ethnically rich community. Indeed, the five traditional public schools of comparable grade level that form a half circle beneath the charter schools (all within two miles) ranged from 18% to 43% White. The most distant elementary school on the map is 74% White, a lower percentage than exhibited by any of the three charter schools (83%, 89%, and 90% White). In response to an early release of the above map, some defenders of charter schools remarked that they see no

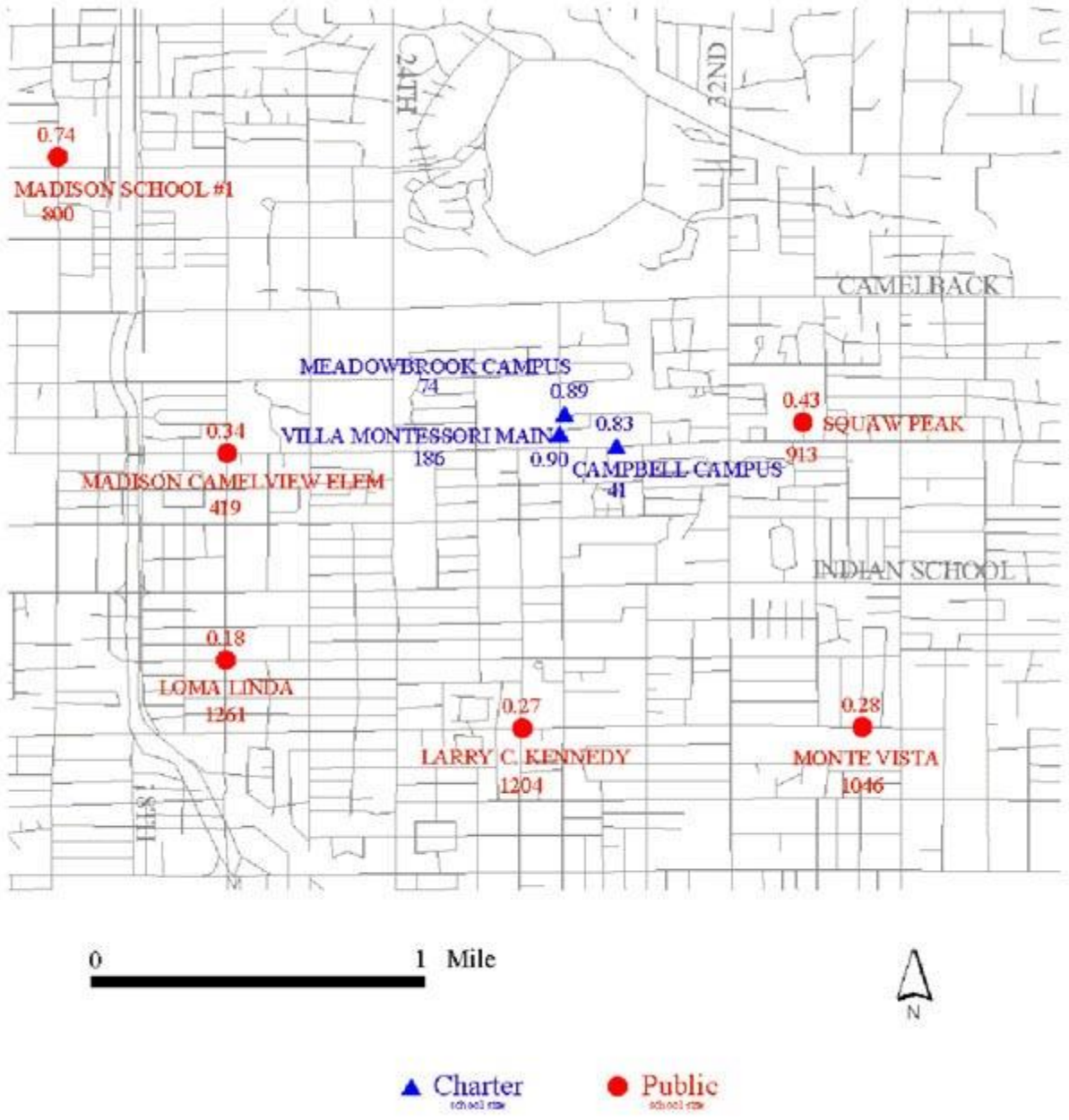

Figure 1. Proportion of White students in east Phoenix elementary-middle schools (1996)

reason that a Montessori school that was historically White would not remain so after becoming a charter school. Conversely, critics of charter schools could point out that the data in the above map represent a failure of parents of non-White students to make market choices in what is alleged to be a market driven system.

The area of Phoenix represented by Figure 2 is predominantly ethnic minority. Indeed, every traditional elementary school within this nine square mile region was under 40% White; six schools were below 15% White. At the K-4 Khlasa Montessori charter school, though small relative to neighboring traditional elementary schools, at least 8 of 10 students were White.

Figure 3 presents the rare instance in which there are more charter schools than traditional public schools though they are small and the vast majority of students in the area attend traditional public schools. This region, which is inclusive of downtown Phoenix, is predominantly ethnic minority. Two of the charter high schools (Arizona School for the Arts and Intelli-School) were considerably more White than the public secondary schools in the area. Arizona School for the Arts was over 3 1/2 times and Intelli-School was over 2 1/2 times as White as North High School. North High School serves as a better public comparison school than either Metro Tech or Desiderata, as these are both non-traditional schools and, further, Desiderata enrolled only 59 students.

Of the four remaining charter schools, three shared similar ethnic distributions with nearby public schools. The Academy of Lifelong Learning charter school enrolled too few students (i.e., 10 students) to be considered as a contributor to ethnic separation.

There is a good possibility that the Arizona School for the Arts drew students from beyond the 13 square mile area encompassed by Figure 3, and perhaps even beyond the 20,000-student, 30%-White district within which it is located. But even beyond this map, the major public high schools within roughly a ten-mile radius of the School for the Arts show percents White enrollment of, in ascending order of distance, 34%, 31%, 17%, 11%, 31%, 67%, 83%, 23%, 66%, 71%, 65%, 52%, 76%, 89%, 37%, 81%, 80%, and 60%. Only one of these schools enrolled as high a percentage of White students as did the Arizona School for the Arts, and this was located on the other side of Squaw Peak Mountain in a vastly different (economically) neighborhood. If the White students at the Arizona School for the Arts were indeed coming from predominantly White districts, they were undertaking very long commutes.

Figure 4 represents roughly the same section of Phoenix as depicted by Figures 2 and 3. In this case, however, the proportion of Black students enrolled in schools of all grade levels is the primary basis for comparison. Most notable is the predominance of Black students in the Future Developers and Performers charter school (92% of 270 students were Black) relative to the traditional public schools (which ranged from 1% to 31% Black). Figure 5 illustrates a similar scenario. These are instances of ethnic separation in which the charter school has a higher proportion of ethnic minorities.

ABC Alternative Learning Center, although only two-thirds White, was substantially more White than the nearby traditional public schools of the same grade level (see Figure 6). The six elementary and middle schools that surround ABC enrolled White students at about half that rate, on average.

The area represented by Figure 7 is a highly segregated region, Hispanic in the upper left corner of the map and Black in the center and to the right. No traditional public

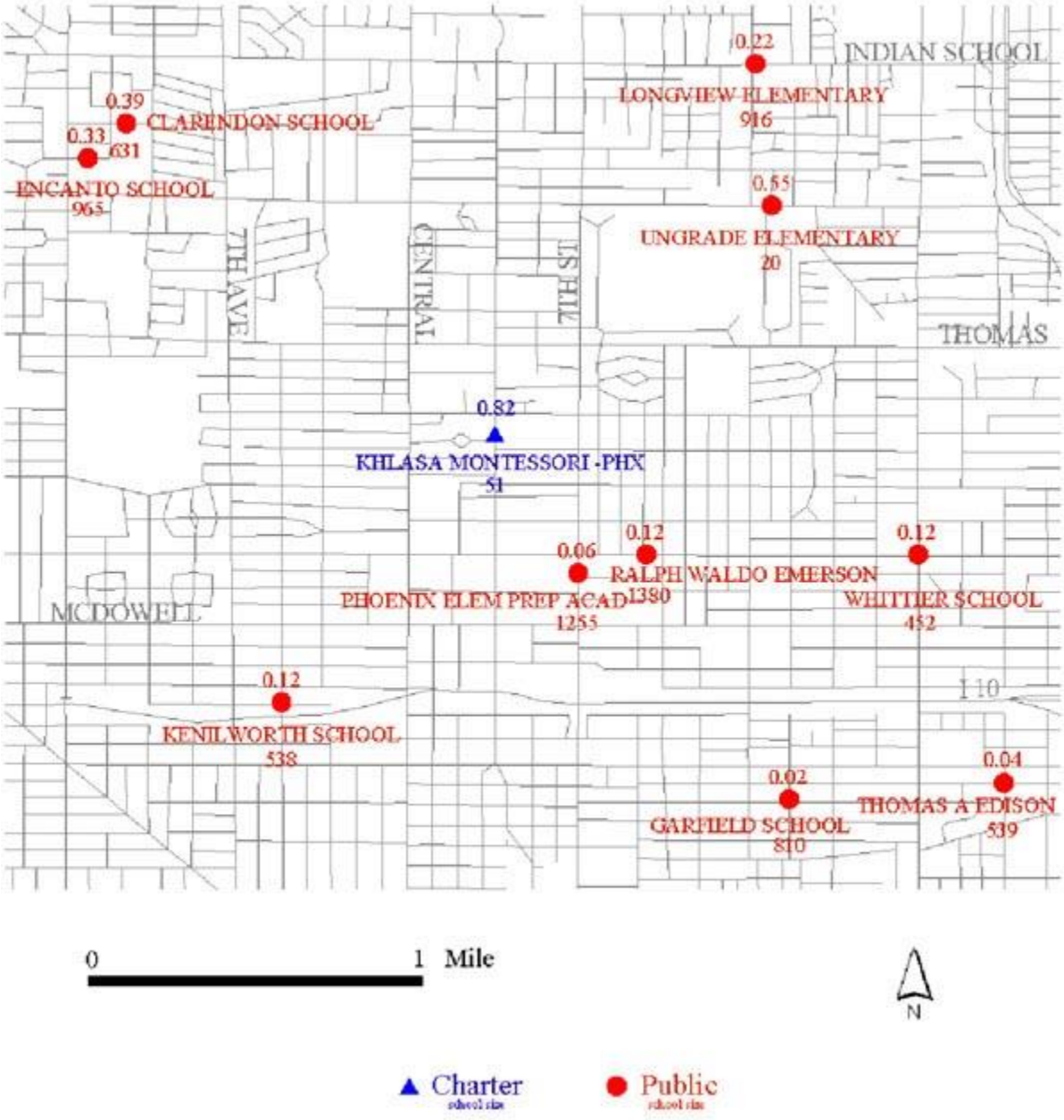

Figure 2. Proportion of White students in central Phoenix elementary schools ('96)

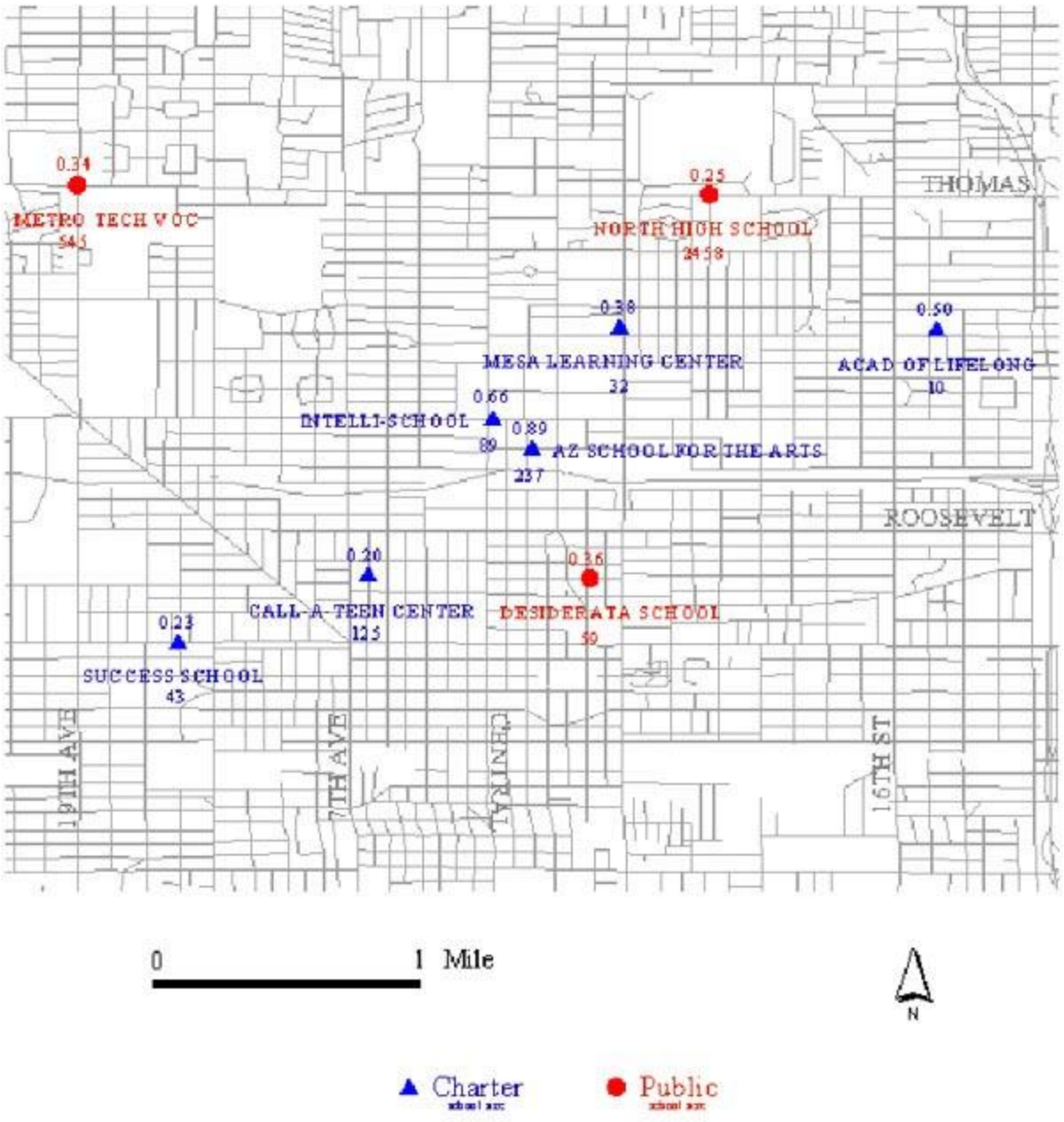

Figure 3. Proportion of White students in central Phoenix high schools ('96)

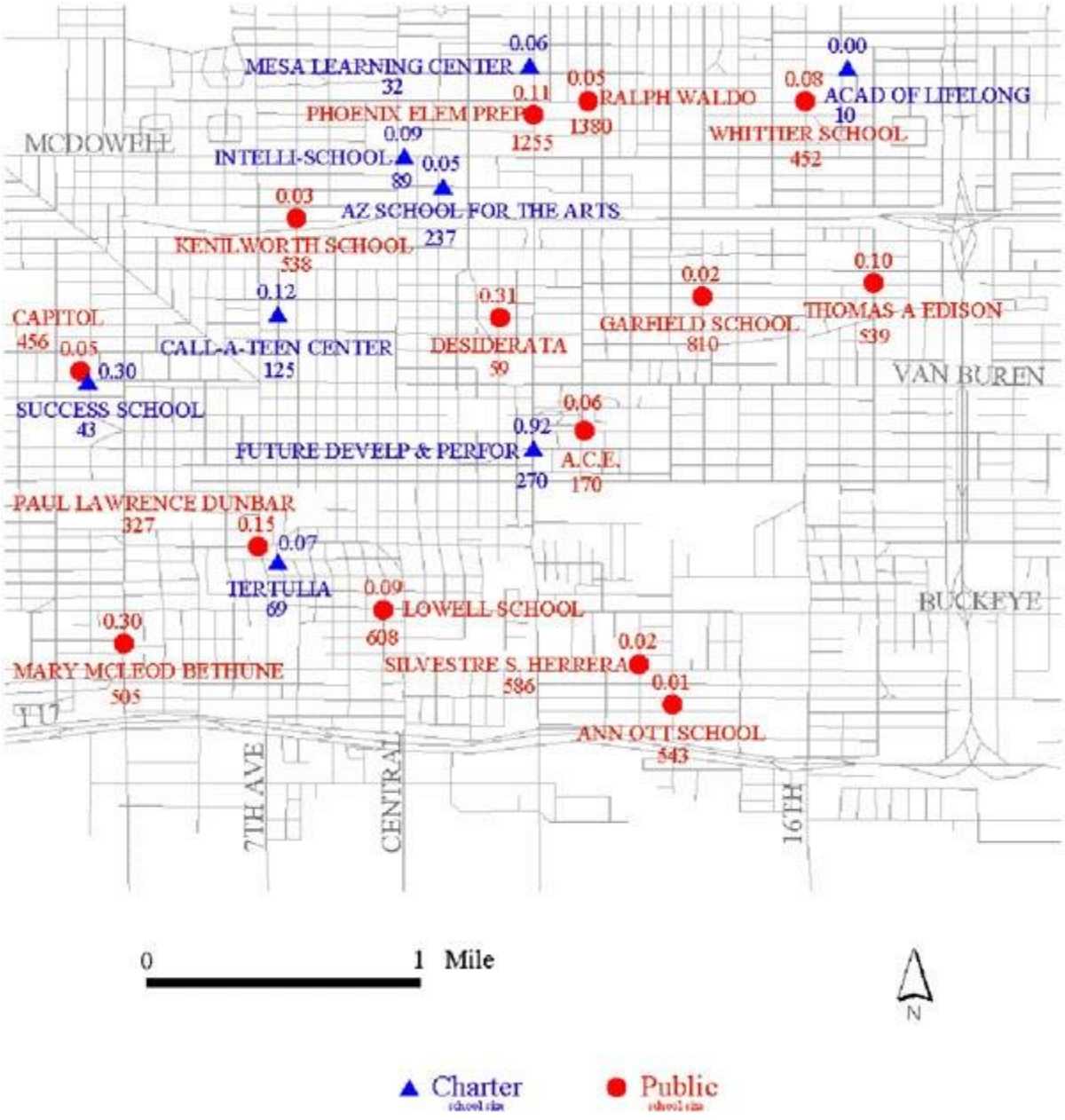

Figure 4. Proportion of Black students in central Phoenix schools ('96)

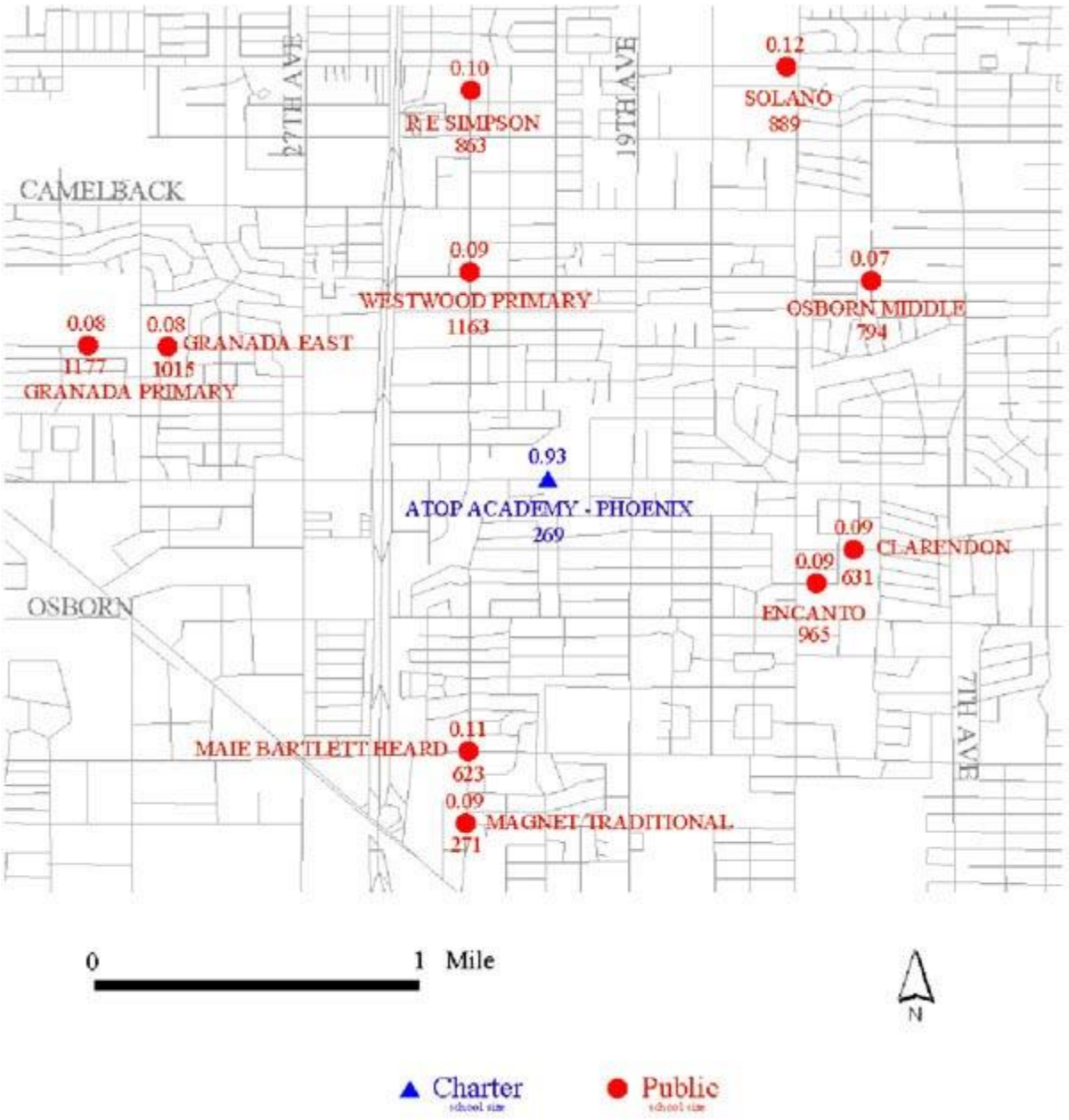

Figure 5. Proportion of Black students in north central Phoenix schools ('96)

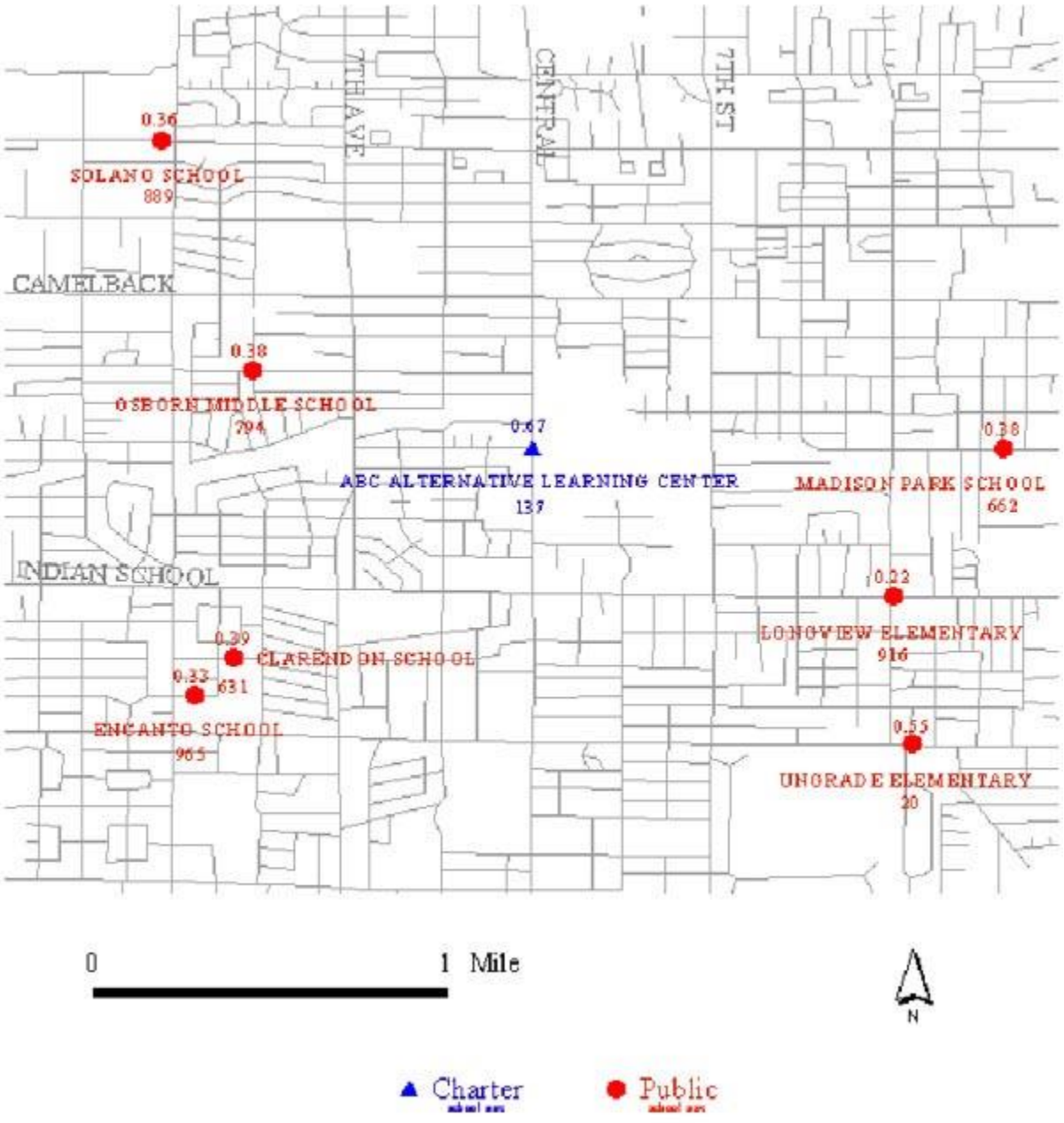

Figure 6. Proportion of White students in north central Phoenix elementary-middle schools ('96)

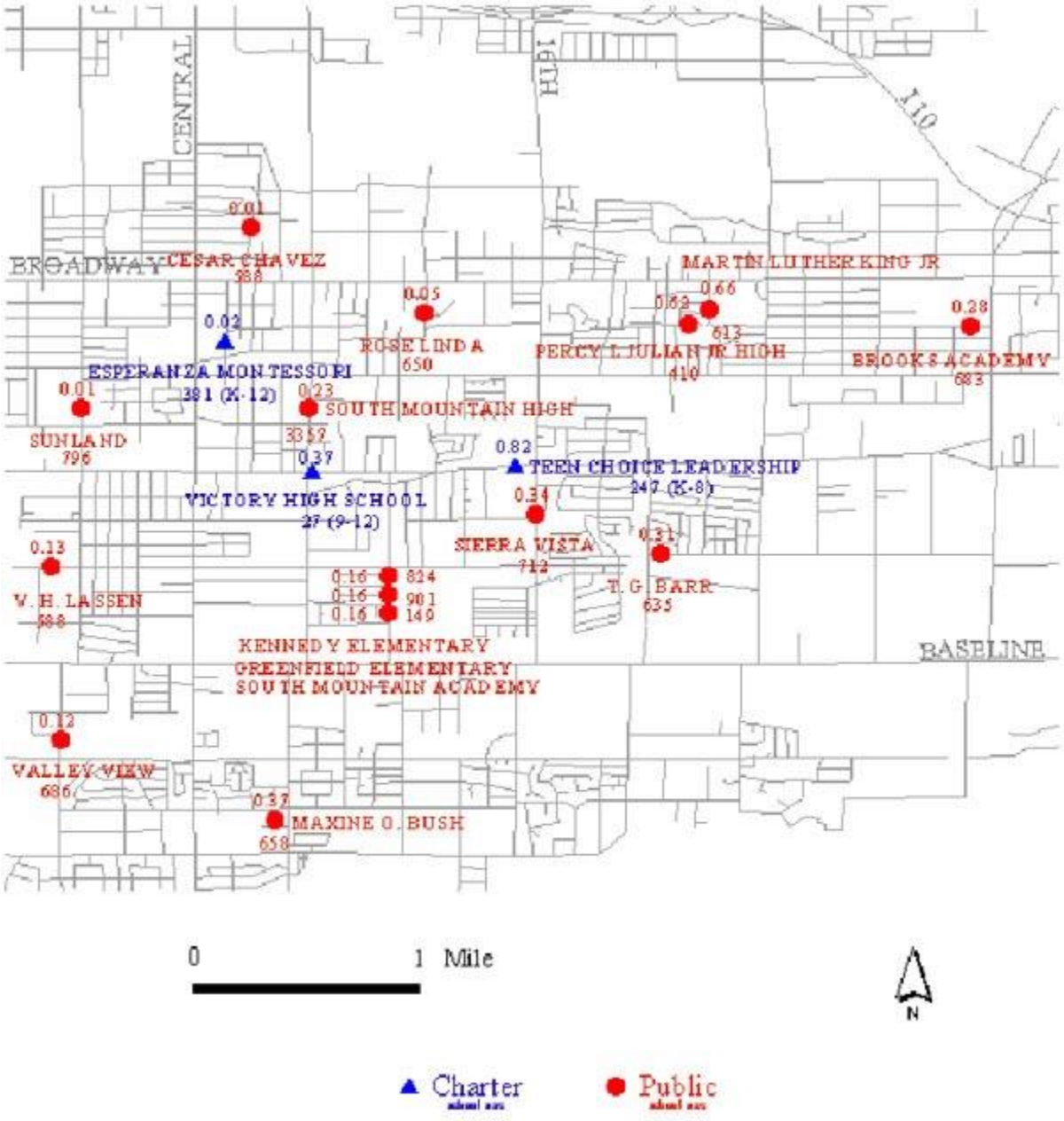

Figure 7. Proportion of Black students in south central Phoenix schools ('96)

school at any grade level enrolled as high a percentage of Black students as Teen Choice Leadership (82% Black, 247 students in grades K-8). The school with the next highest percentage of Blacks, Martin Luther King, Jr. School, was 16% points less (66% Black, 613 students in grades K-4). The percentage of Blacks for the eight remaining traditional public schools within roughly a one-mile radius from Teen Choice Leadership were: 5%, 16%, 16%, 16%, 23%, 31%, 34%, and 62%.

Figure 8 shows the Gateway Community charter high school (70% White) amidst eight traditional public elementary and middle schools. Not shown are the three nearest public high schools, Arcadia (83% White), Tempe (52% White), and North (25% White). They were not shown due to their scattered and distant locations from Gateway. Based on proximity, Arcadia would be the best comparison high school (a four-mile drive from Gateway). But given this distance, Tempe (5.2 miles) and North (5.8 miles) should not be excluded from comparison. The proportion of White students among these schools varied to the point where simultaneous comparison to all three left the situation unresolved.

In any case, the map was included because the eight propinquitous schools, though serving students from lower grade levels, reflect the ethnic composition of the region. The two public schools that flank Gateway were 6% and 13% White. The percentage of White students at Gateway is inconsistent with those of nearby schools, which is perhaps suggestive of ethnic separation.

It is reasonable to assume that, given its sponsorship by and physical location within Gateway Community College, Gateway Community High School drew at least some students from distances well beyond its immediate area. It is likely that at least some of the students were children of parents who attend or work at the Community College--parents who probably lived in all areas of the Valley. That said, there is roughly 35 square miles of area surrounding Gateway Community High School (excluding the airport and its adjacent industrial development) where there is no high school. Technically, Gateway is located within the boundaries of the Phoenix Union High School District, which is 30% White. Indeed, it would take quite an effort on the part of parents to transport their children on an almost daily basis to Gateway Community High School.

Most of Scottsdale is so homogeneously White that ethnic separation could not occur. The southern section, however, is at least partly ethnic minority and thus is subject to possible ethnic stratification. Figures 9 and 10 present scenarios in which this possibility is realized.

Figure 9 depicts three charter schools that together span grades K-8. Two of these appear to contribute to ethnic separation (Villa Montessori and Scottsdale Horizons). Indeed, no public school on the map enrolled as high a proportion of Whites as either Scottsdale Horizons or Villa Montessori. Scottsdale Horizons served 226 students in grades K-8, 87% of which were White. The nearest traditional public schools that span the same grades are Yavapai Elementary (62% White) and Supai Middle (73% White). Both are less than a mile away from Scottsdale Horizons. Villa Montessori, a K-2 school, enrolled only 36 students, 11% of which were ethnic minority. Neighboring Tonalea Elementary (only one-half mile away) enrolled 608 students, 25% of which were ethnic minority.

The two schools in Figure 10 are the only two secondary schools in an area that covers at least 30 square miles. The 262-member New School for the Arts charter school clearly served a higher percentage of White students than the traditional public high school (91% compared to 76% White).

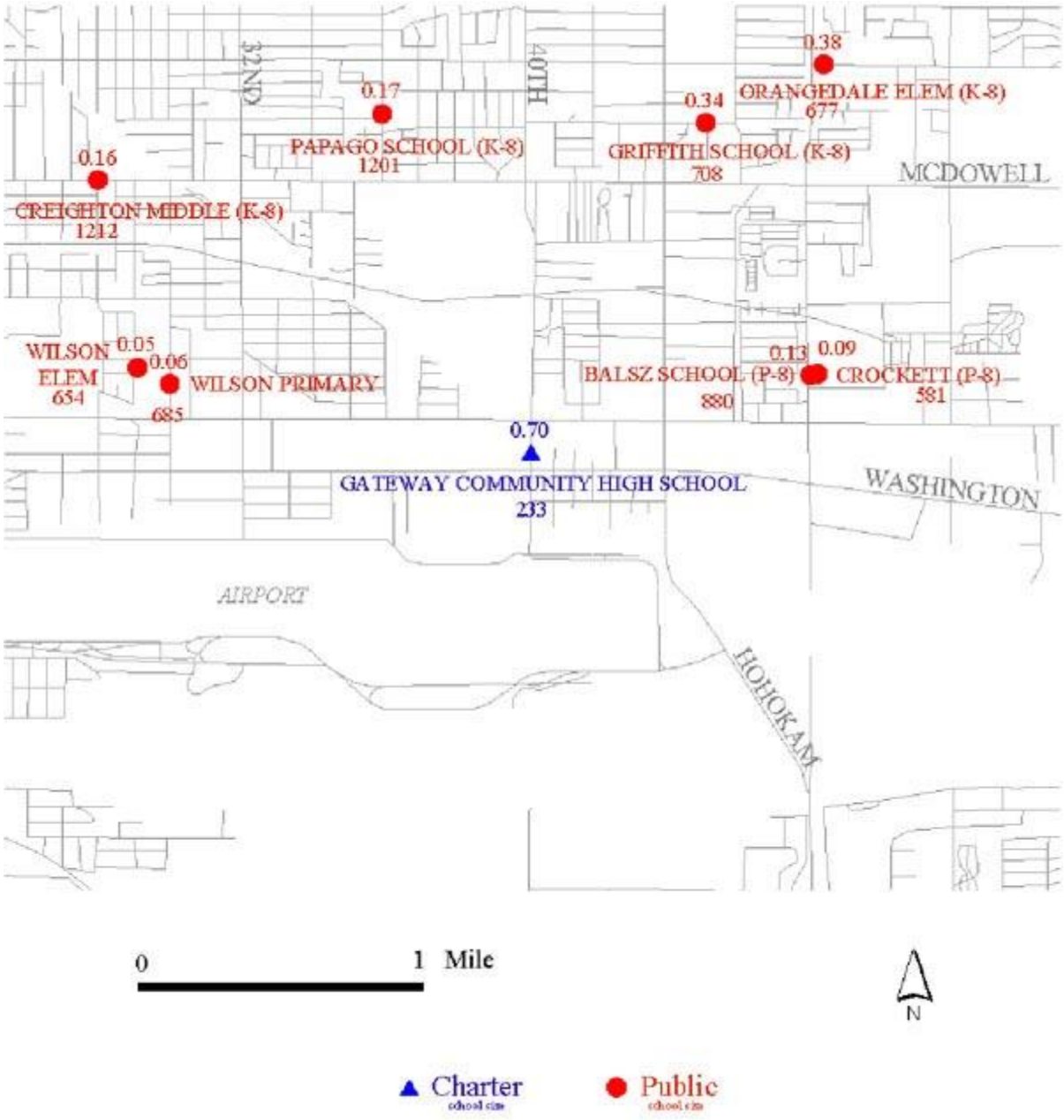

Figure 8. Proportion of White students in southeast Phoenix schools ('96)

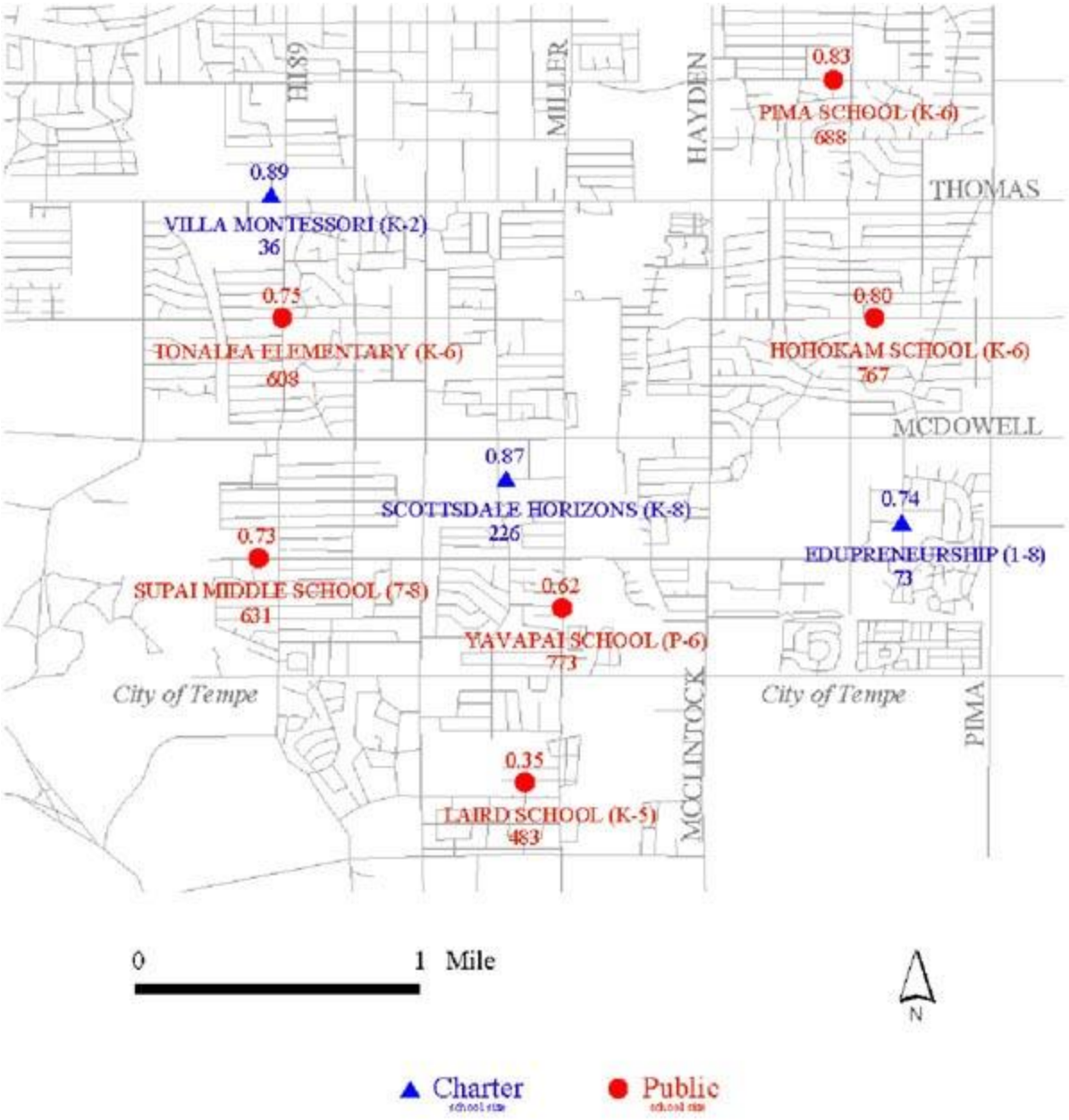

Figure 9. Proportion of White students in south Scottsdale elementary-middle schools ('96)

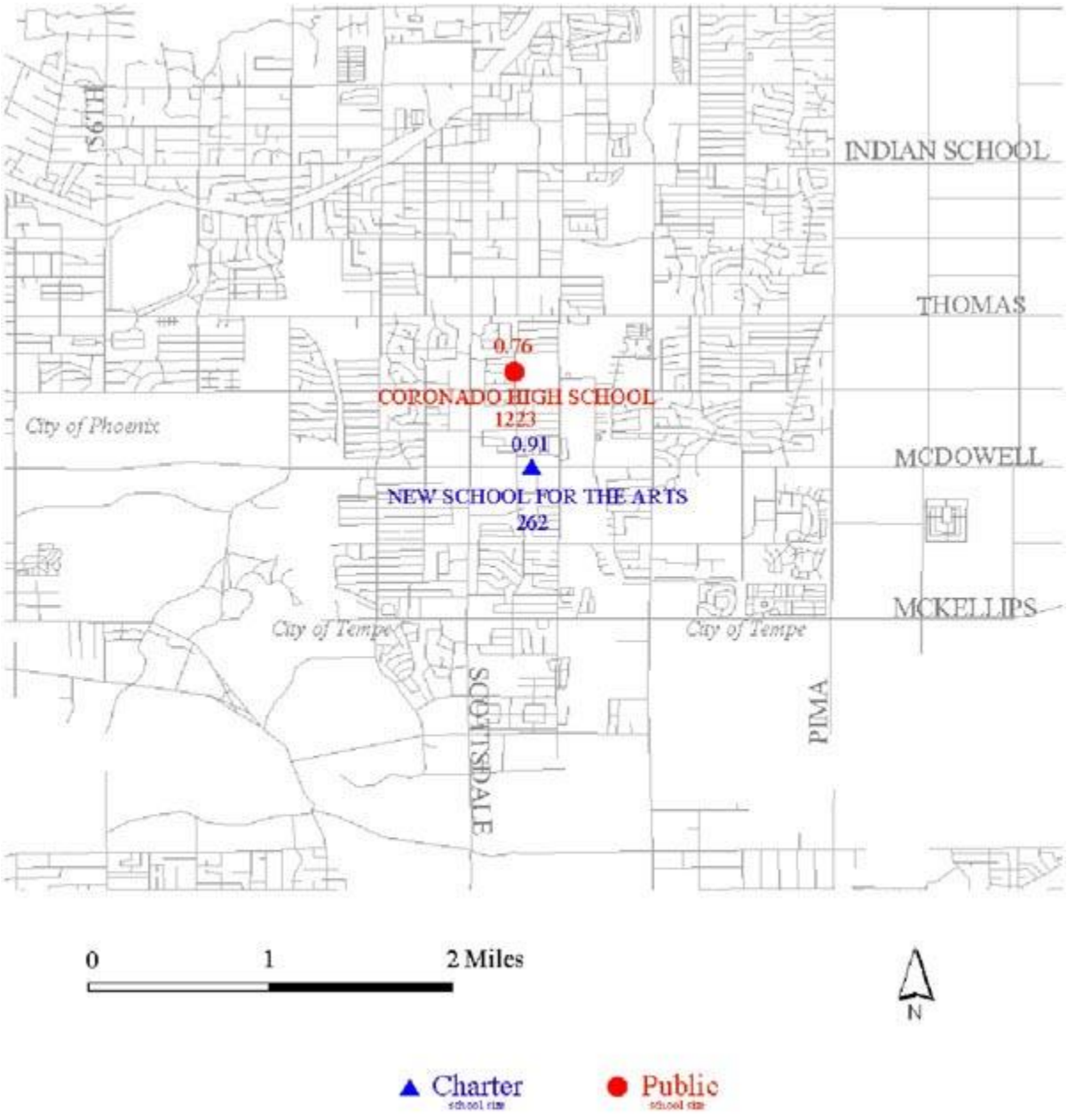

Figure 10. Proportion of White students in south Scottsdale high schools ('96)

A parent of a former student at the New School for the Arts reported that the school had previously assessed a registration and equipment fee. The student elected to focus her studies on photography, which required an equipment fee of around $600. Although this has not been formally verified (the parent claims to possess the receipt), if true, such practices serve to exclude families of lower socioeconomic status. Moreover, to the extent that there is a relationship between ethnicity and socioeconomic status, such practices may serve to exclude students from particular ethnic backgrounds. These practices have not been found to be unconstitutional, however.

In Figure 11, Montessori Day Public is Whiter than any of the nine other elementary schools. The percent White for the five nearest public elementary schools, in order of proximity, are 76%, 60%, 41%, 49%, and 78%.

Tempe Prep Academy charter school is located less than a quarter mile from Fees Middle School (see Figure 12). Fees Middle School served nearly three times the proportion of ethnic minority students than did Tempe Prep. No other middle schools are located in this 25 square mile area.

Figure 13 consists of the three major public high schools in Tempe, a small public alternative high school, and a large-sized charter school. Seventy percent of the 295 students at Arizona Career Academy were White; fifty-two percent of the 1359 students at the nearest traditional public high school (Tempe High School) were White. Arizona Career Academy was 10% points more White than either McClintock or Marcos De Niza High School.

In Figure 14, it is difficult to judge the degree, if any, to which Copper Canyon Academy is ethnically segregated relative to surrounding public schools. If Copper Canyon is simultaneously compared to the 11 public schools of comparable grade levels, conclusions are elusive. Comparison of the percentage of White students to those schools to the north of Copper Canyon (specifically, north of Northern Avenue) do not indicate any evidence of ethnic separation. In contrast, comparison to the traditional public schools to the south does, as Copper Canyon enrolled a higher percentage of White students than all but one of the schools (60% compared to 41%, 45%, 22%, 44%, 50%, 20%, and 67%).

The group to the south may be a more appropriate comparison group for two reasons. First, this cluster of schools is nearest to Copper Canyon. In fact, the closest four schools, which are all nearly within 1 1/2 miles, were 41%, 45%, 22%, and 44% White. Second, Copper Canyon is located within the boundaries of the Glendale Elementary District, which is on average slightly under 50% White. The schools to the north reside in the Peoria Unified District, which is 78% White. This is not to say that students who lived within the Peoria District attendance boundary did not or could not attend Copper Canyon Academy. To be sure, Copper Canyon is situated in the northern part of the Glendale Elementary District, and thus close to the Peoria District border. But under the assumption that Copper Canyon enrolled the majority of its students from the district in which it is located, the Glendale Elementary District is the appropriate comparison group. Indeed, it is quite plausible that parents from the Glendale District elected not to enroll their children in one of the several district schools but instead enrolled them in the charter located within their district.

If not for the anomalous Franklin public schools in Figure 15, one could rather easily confirm ethnic separation on the part of Mesa Arts Academy. So termed "anomalous" because the Franklin West and 7&8 schools (which are located on the same site) enrolled an extraordinarily high percentage of White students given their location in an ethnically mixed area. The census tract which encompasses Franklin West, Franklin 7&8, and Mesa Arts Academy was 37% White in 1995. The census tract that encompasses Arizona Career

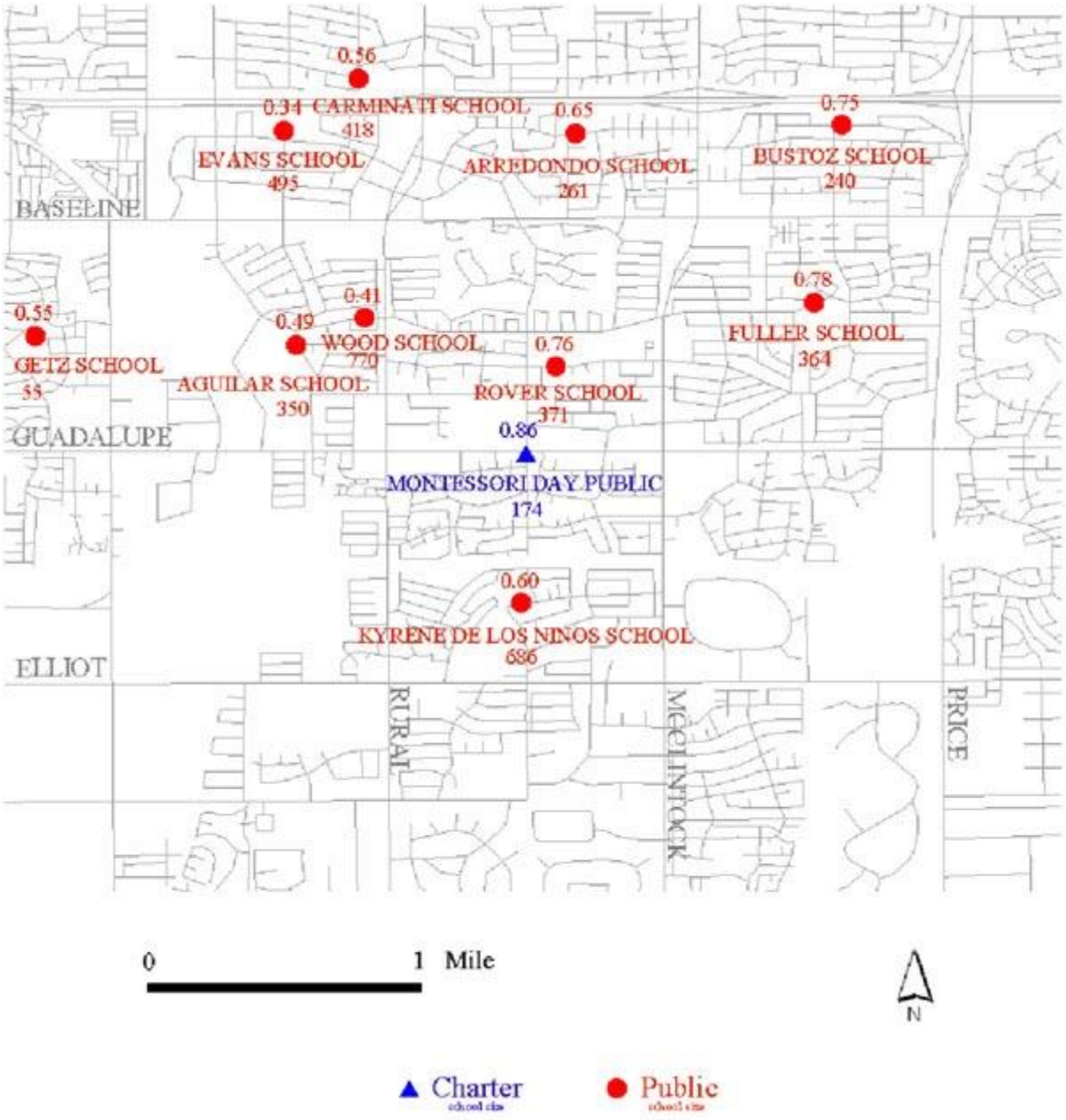

Figure 11. Proportion of White students in Tempe elementary schools ('96)

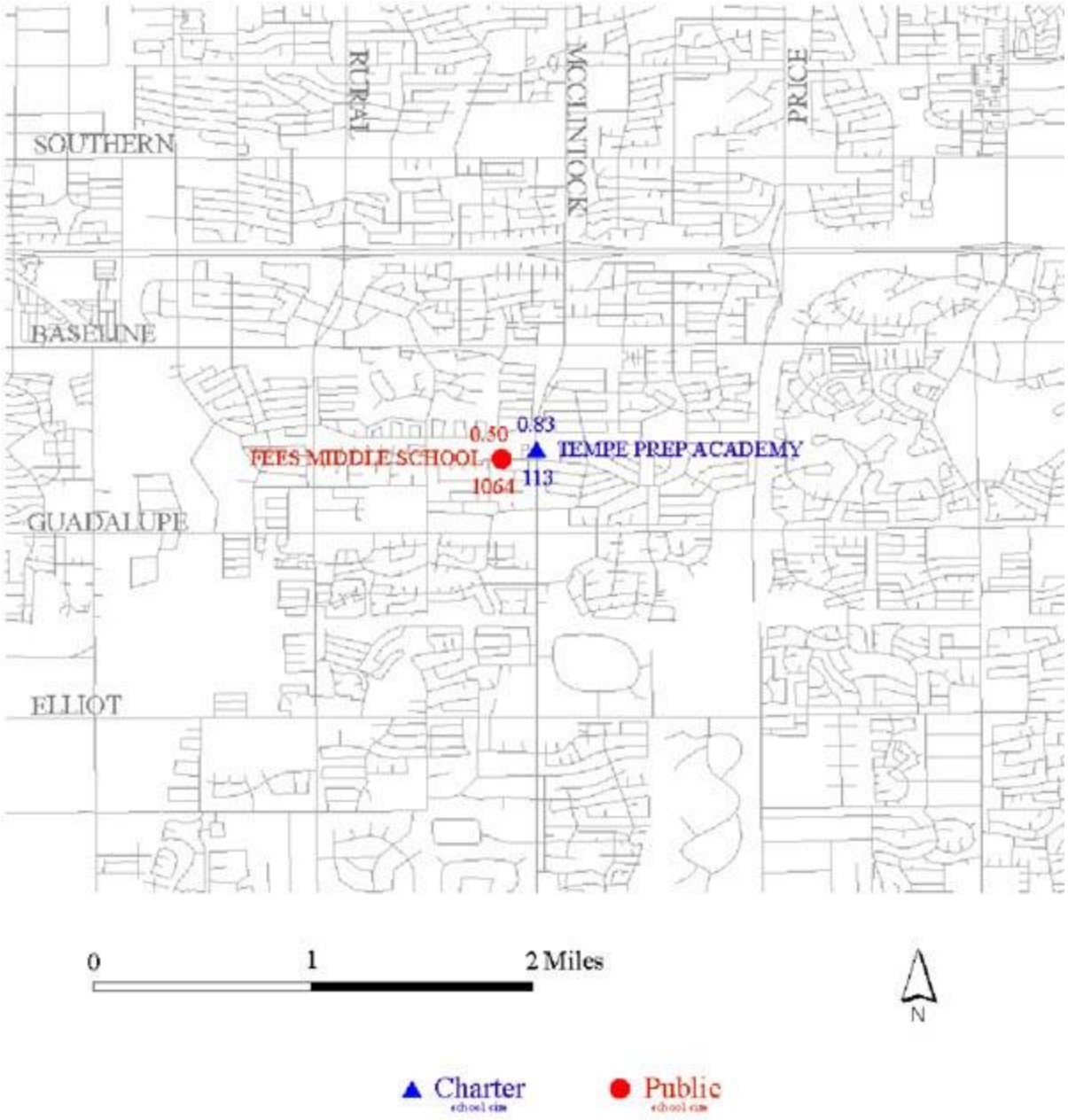

Figure 12. Proportion of White students in Tempe middle schools ('96)

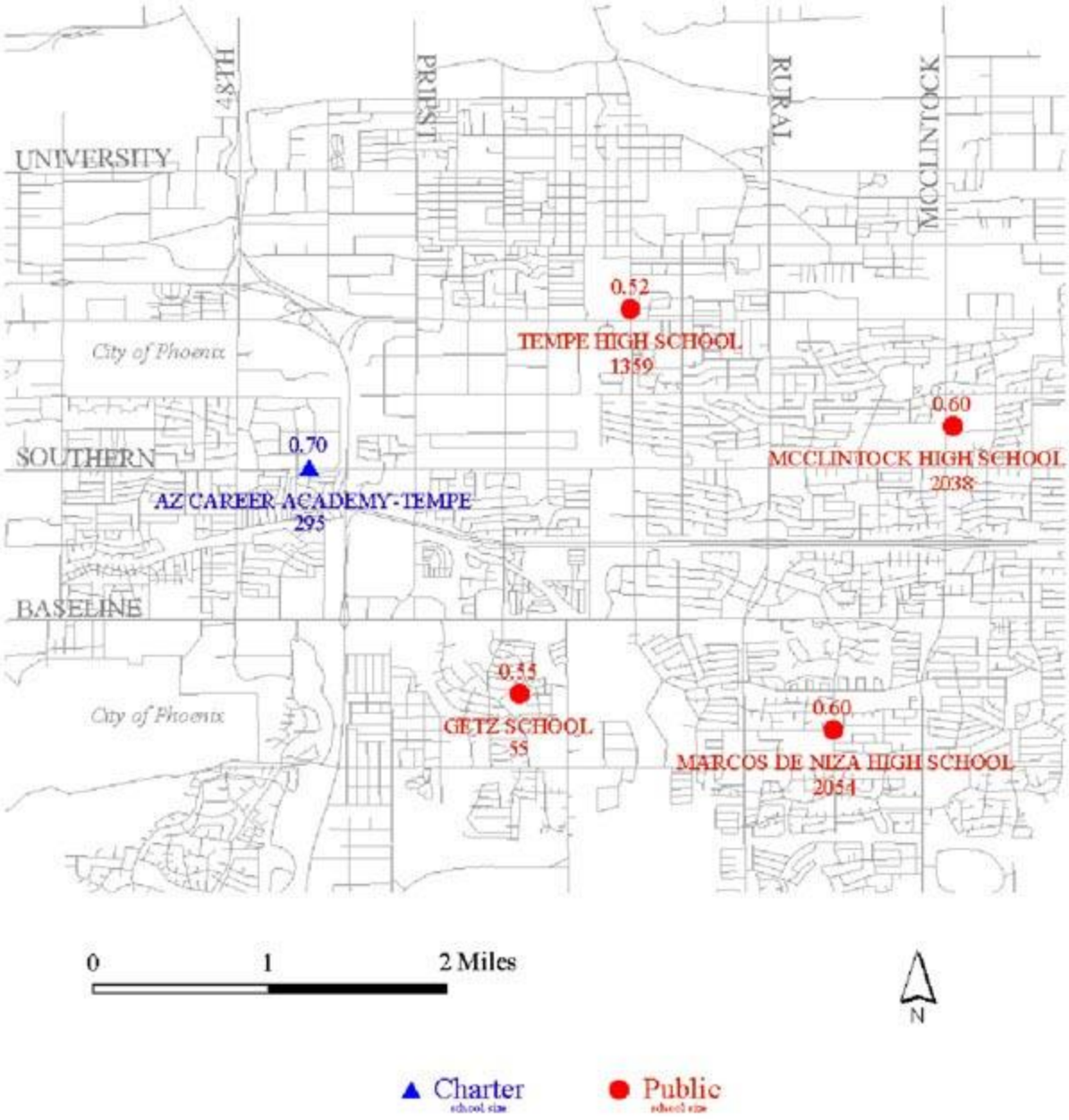

Figure 13. Proportion of White students in Tempe high schools in ('96)

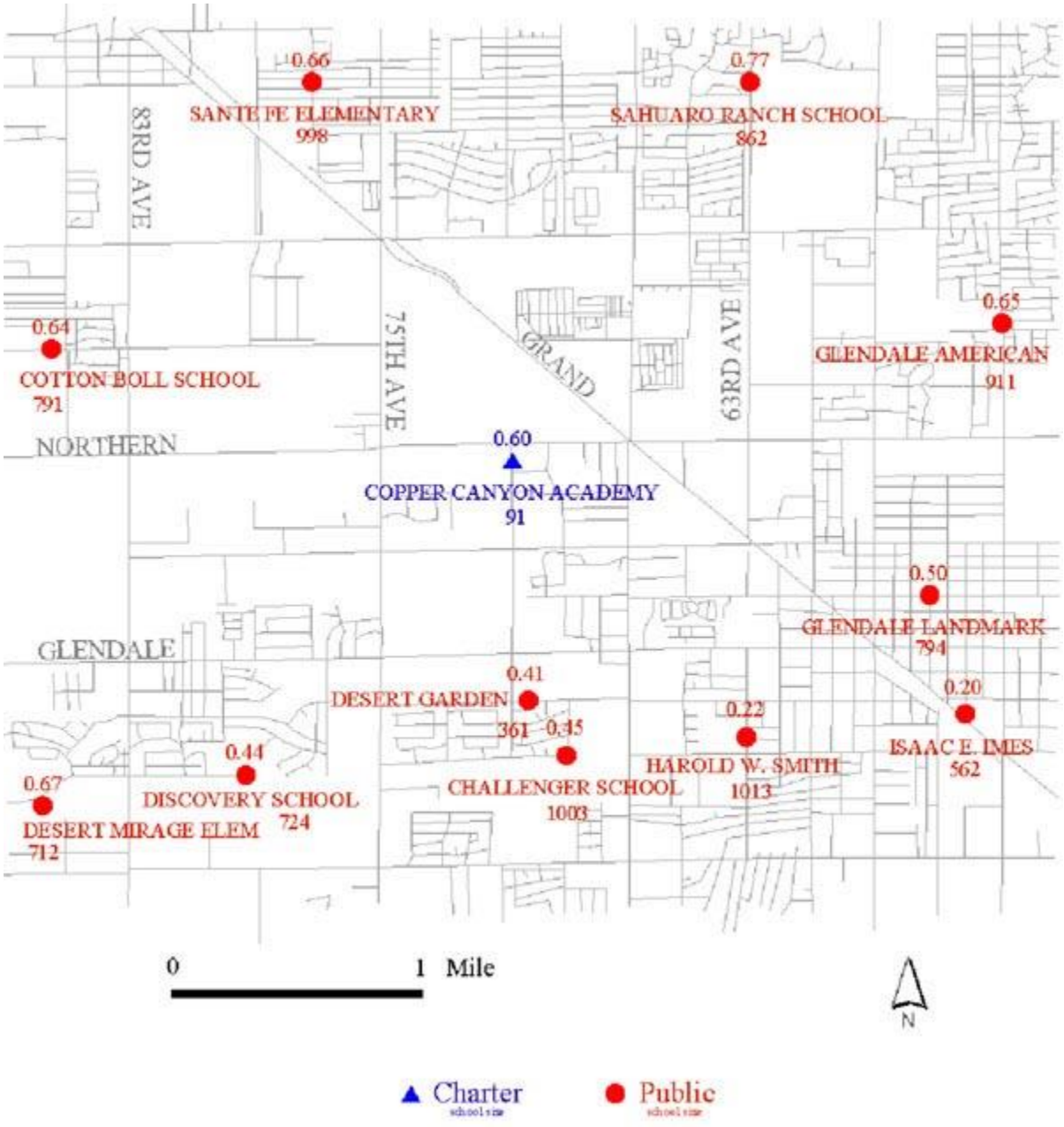

Figure 14. Proportion of White students in south Glendale elementary-middle schools ('96)

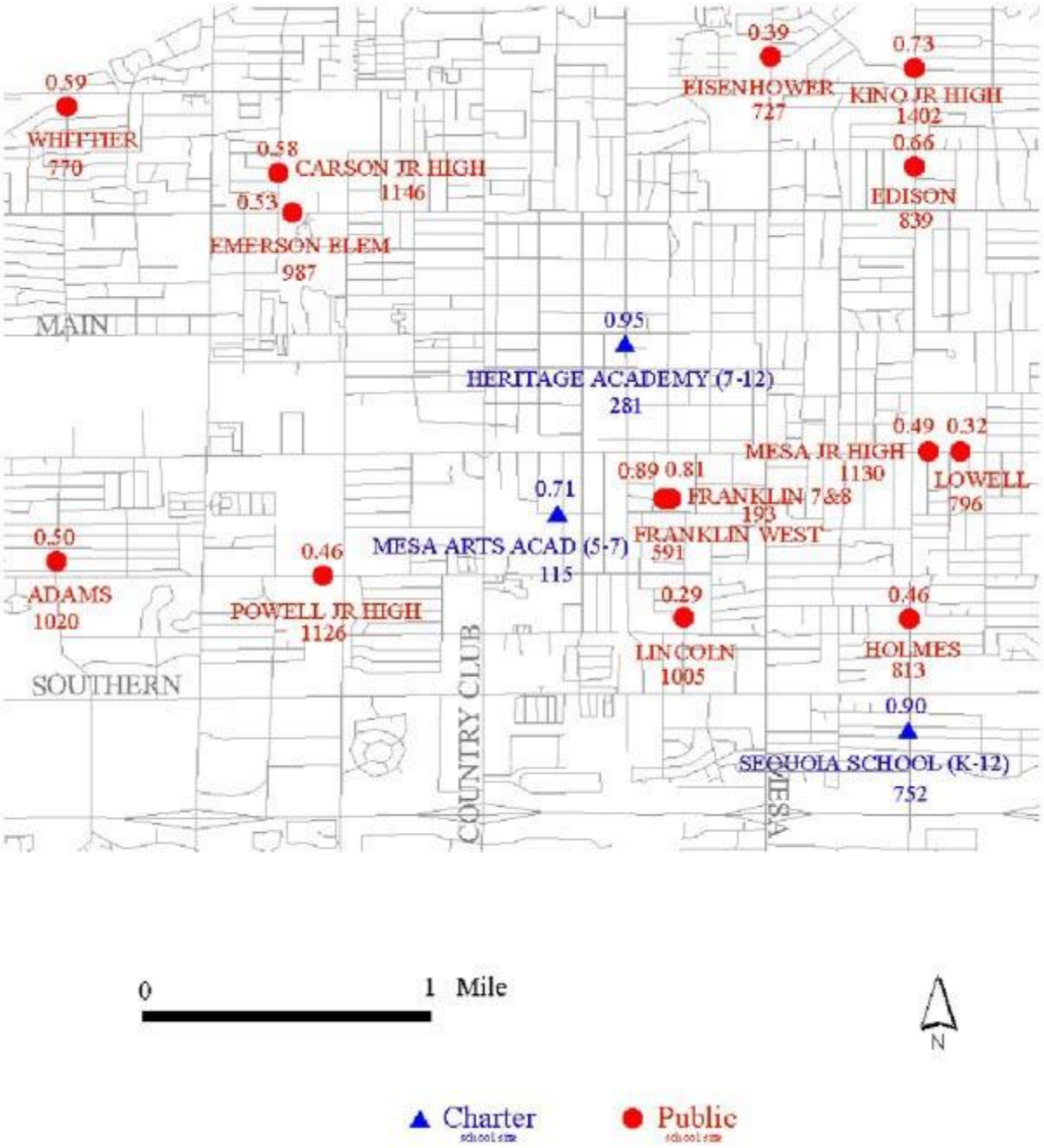

Figure 15. Proportion of White students in west Mesa elementary-middle schools ('96)

Academy, Intelli-School, Heritage Academy, and Mesa Vista High School was 59% White.

How could the Franklin public schools be so White in an area that was predominantly ethnic minority? For one, the Mesa School District open enrollment policy allows parents to choose among public schools, and the prestigious Franklin schools are an especially popular choice. There is a distinct lofty status attached to these schools, and it has been said by more than one individual that they are similar to private schools. At least in part, this explains how a public school that is 80-90% White is located in a neighborhood that is principally ethnic minority. In essence, the Franklin schools appear to contribute to ethnically separating students; however, they are an aberration among the public schools in that area. The remaining public schools are (more) ethnically representative of the community in which the charter school academies reside.

Removing the anomalous Franklin schools for the moment, the comparison between Mesa Arts Academy charter school and its immediate public school neighbors (71% White to 46% and 29% White) strongly suggests ethnic separation. The Sequoia charter school is treated separately in Figure 18.

In Figure 16, it is difficult to assess the degree of ethnic separation on the part of some of the charters because the two nearest public comparison high schools, which exhibit disparate levels of White enrollment, are located well to either side of the cluster of charter schools. Slightly over two miles to the west is Westwood High (63% White, 2451 students) and four miles to the east (not shown) is Mesa High (75% White, 2714 students). Actually, the closest high school is Mesa Vista High School, but this is a small alternative school, and thus perhaps not the best comparison.

Due to their high proportions of White students, assessing the degree of ethnic separation was less of a problem for two of the charter high schools. The largest charter high school in the group, Heritage Academy (95%), was more White than Mesa Vista High (41%), Westwood High (63%), and Mesa High (75%). Intelli-School (73%) was more White than Mesa Vista High (41%) and Westwood High (63%).

The Benjamin Franklin Charter School in Mesa enrolled 244 students in grades K-4; virtually all students were White (see Figure 17). The nearest public school, the Lehi School, is less than three-fourths of a mile away. It served 755 students in grades K-6, of which 56% were White. The next nearest public elementary schools equidistantly flank Benjamin Franklin (Whitman School and MacArthur School). These schools were 54% and 92% White, respectively. A discrepancy of this magnitude between two comparison schools seemingly of equal comparative value was cause for further exploration.

Given the close proximity of the Lehi and Benjamin Franklin schools, an inspection of their enrollments over time seemed fitting. Table 9 presents enrollments by selected ethnicities for both schools over a five-year period.

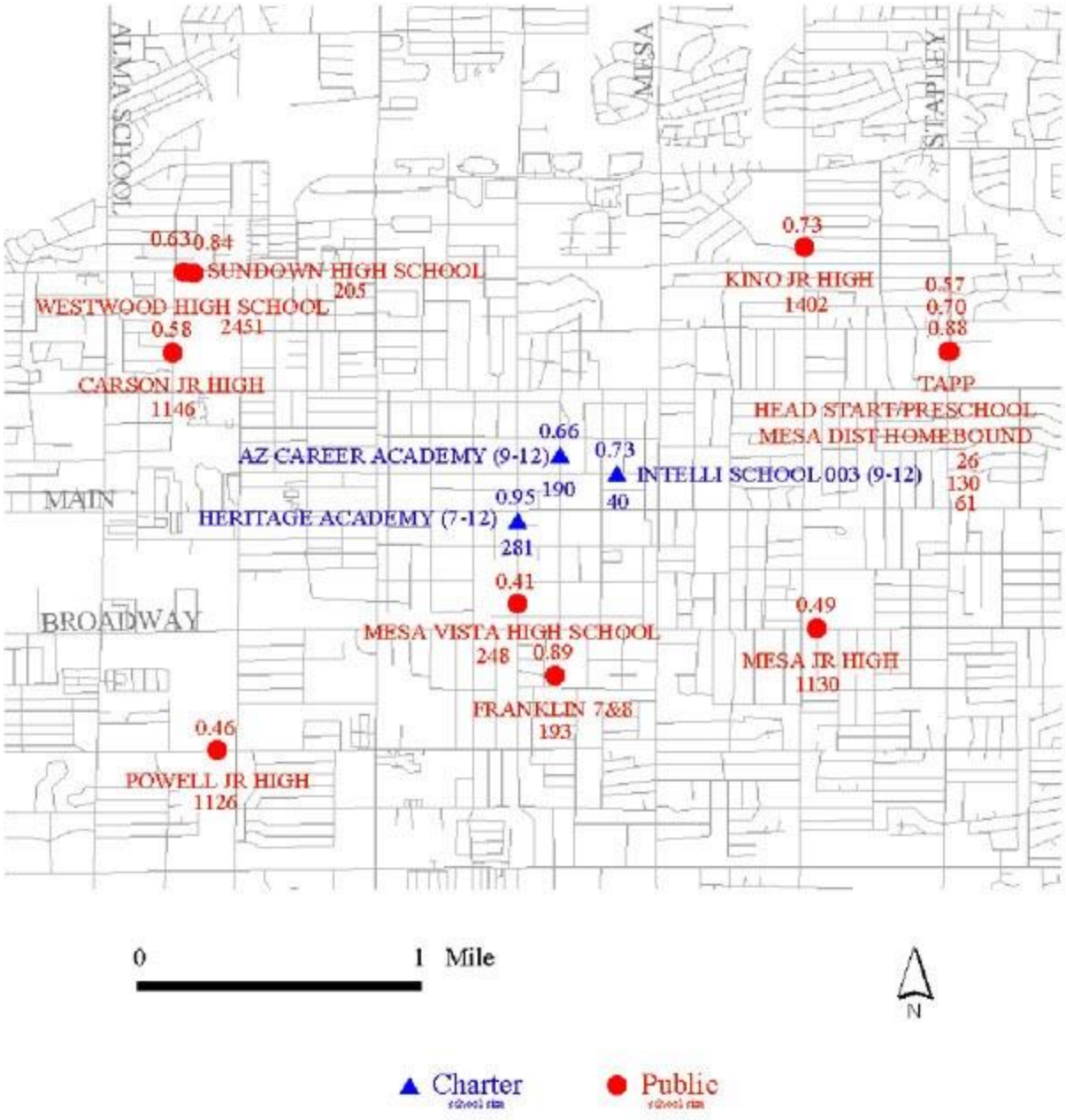

Figure 16. Proportion of White students in west Mesa middle-high schools ('96)

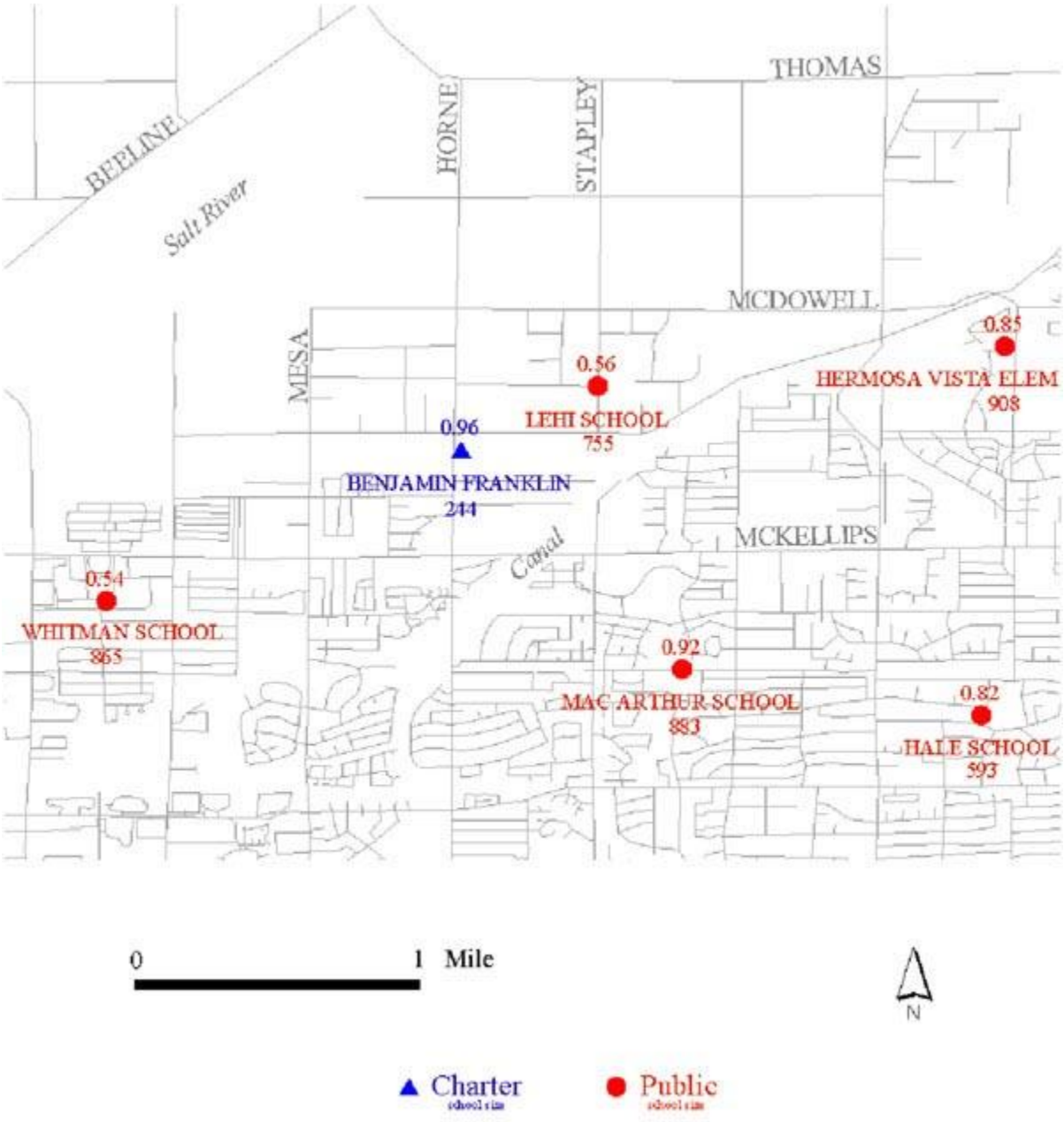

Figure 17. Proportion of White students in northwest Mesa elementary schools ('96)

Table 9
Enrollment Trends by Selected Ethnicities for Neighboring Public and Charter Schools

Lehi Public School (P-6)					
	1993	1994	1995	1996	1997
No. White	497	486	456	426	415
No. Hisp	101	100	130	139	118
No. Am Ind	156	157	174	175	159
% White	64%	64%	59%	56%	59%
No. Students	781	761	779	755	704

Benjamin Franklin Charter (K-4)*					
	1993	1994	1995	1996	1997
No. White	-----	-----	147	235	226
No. Hisp	-----	-----	6	4	9
No. Am Ind	-----	-----	0	1	1
% White	-----	-----	93%	96%	91%
No. Students	-----	-----	158	244	248

* Opened in Fall of 1995

The numbers of Hispanics and American Indians remained relatively stable across the five years. The number of Whites at Lehi changed little from 1993 to 1994, but after 1994, a declining trend emerged. The number of White students dropped from 486 in 1994 (the year prior to the opening of the charter school) to 426 in 1996. This decline in the number and percentage of White students was concomitant with the opening of a 93% White charter school less than three-fourths of a mile away. Although the decline in White students at Lehi does not account for the number of Whites that attended Benjamin Franklin, there is cause for suspicion. A phone call to the Lehi School contact person confirmed that Lehi has lost students to Benjamin Franklin.

Incidentally, the number of White students enrolled at MacArthur was the same in 1997 as it was in 1995. This is perhaps indicative of an absence of migration of White students to Benjamin Franklin (a finding that further erodes MacArthur's comparative value).

Ninety percent of students at the K-12 Sequoia School were White (see Figure 18). Proximal schools enrolled a far lower percentage of White students (on the order of 15% to 60% lower).

In an attempt to find evidence that White students migrated to Sequoia from nearby public schools, Keller School enrollments were analyzed over time (see Table 10). (Only 1996 ADE data was available for Sequoia.) Most notable from Table 10 is the decline in the number of White students at Keller, especially the precipitous drop between 1996 and 1997. The number of Hispanic students enrolled at Keller remained stable across the five-year

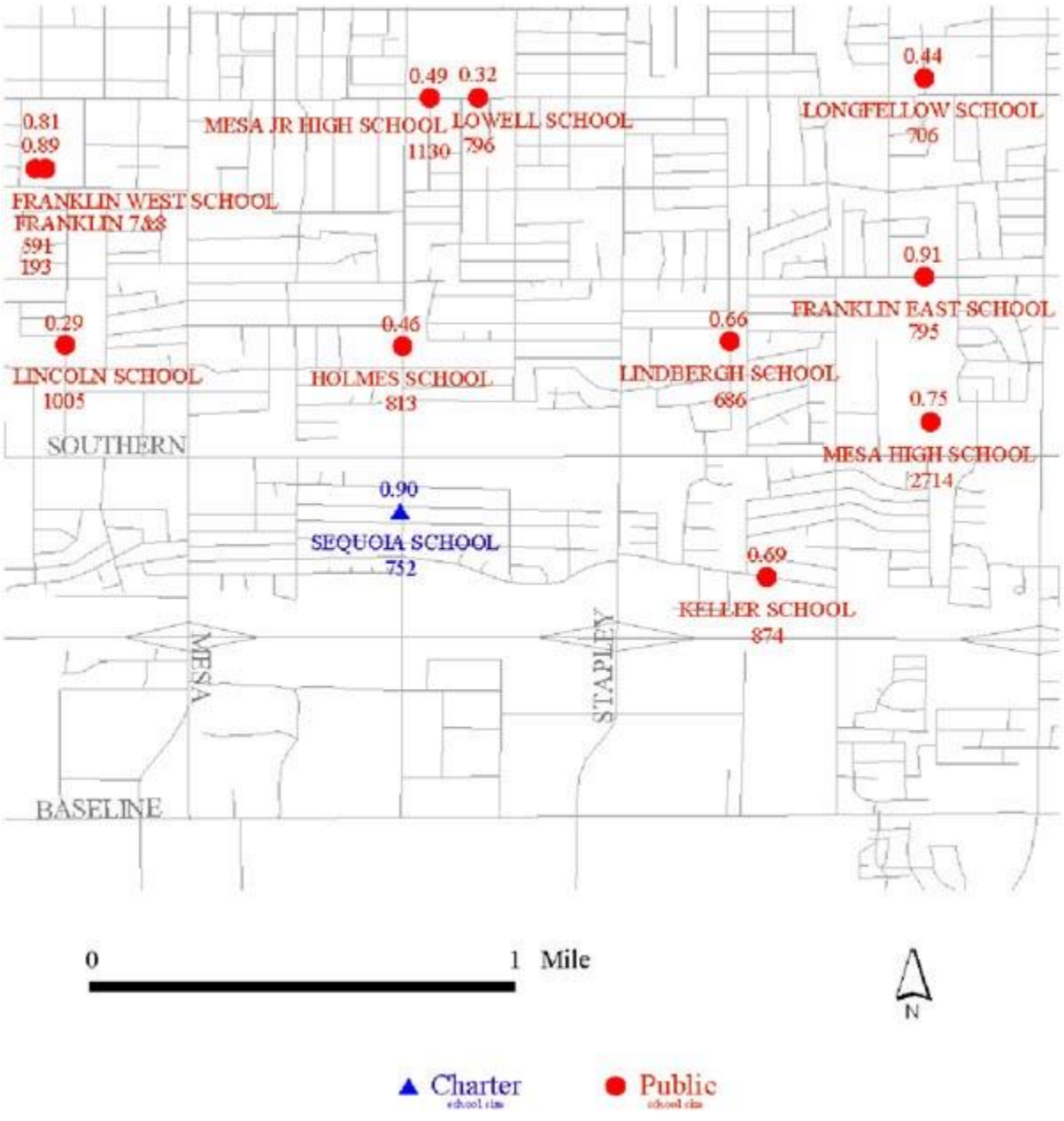

Figure 18. Proportion of White students in central Mesa schools ('96)

period. It remains uncertain whether this apparent "White flight" flew in the direction of Sequoia. What is clear, however, is that Sequoia is disproportionately White relative to surrounding public schools.

Table 10
Keller School (P-6) Enrollment Trends by Selected Ethnicities

	1993	1994	1995	1996	1997
No. White	660	654	628	606	533
No. Hisp	182	170	181	182	195
% White	74%	75%	71%	69%	67%
No. Students	892	875	881	874	797

Figure 19 shows two charter schools that enroll vastly different proportions of White students. Ethnic minority students participated in the Carmel Community Arts charter schools at about half the rate at which they participated in the PPEP TEC vocational school.

PPEP TEC charter school served a higher percentage of ethnic minority students than the nearest traditional public high school by 17%. In contrast, the Carmel Community Arts charter school enrolled a far higher percentage of White students as compared to the four nearby traditional public schools (82% compared to 36%, 24%, 63%, and 9% White).

Matched Comparisons

Table 11 presents the results of the matched comparison analysis. The matched pairs are listed in descending order of the difference in the percentage of White students. Of the 55 matched pairs, 30 charter schools were more White than their public comparison school by an average of 27 percentage points. Twenty of these were 15 (or greater) percentage points more White than their public school neighbor. In contrast, only 2 public comparison schools enrolled more than 15 percentage points more White students than the matched charter school.

Furthermore, after removing the ten pairs of schools in which ethnic separation could not occur (e.g., schools located in census tracts that were 90% or more White), the trend toward ethnic separation becomes even more apparent. Instead of 20 of 55 (or 36%) charters that were 15% or more White than their public comparison school, the proportion increases to 20 of 47 (or 43%).

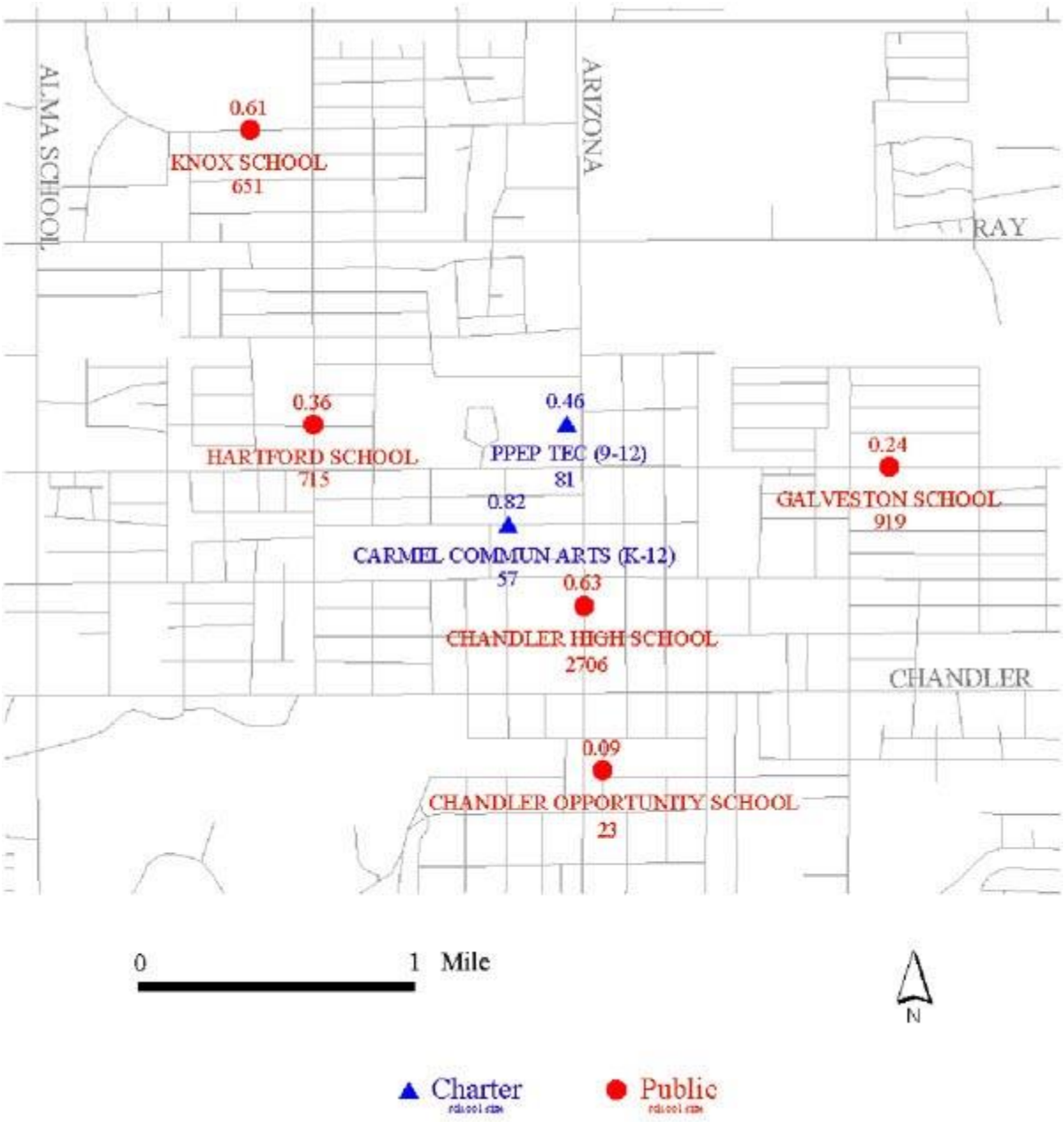

Figure 19. Proportion of White students in central Chandler schools ('96)

Table 11
Difference in Percent White for
Matched Pairs of Metro Phoenix Schools (n=55)

Nearest Public School(s)		Charter School			
% White	No. Stu.	% White	No. Stu.	Level	Difference % White
12%	1380	82%	51	EL	70%
25%	2458	89%	237	MS-HS	64%
34%	419	89%	74	EL	55%
41%	248	95%	281	MS-HS	54%
43%	913	90%	186	EL-MS	47%
22%	916	67%	137	EL-MS	45%
25%	2517	66%	89	HS	41%
56%	755	96%	244	EL	40%
43%	913	83%	41	EL	40%
22%	1013	60%	91	EL-MS	38%
50%	1064	83%	113	MS	33%
41%	248	73%	40	HS	32%
64%	4657	90%	752	K12	26%
56%	4749	82%	57	K12	26%
41%	248	66%	190	HS	25%
25%	2458	50%	10	HS	25%
67%	1404	87%	226	EL-MS	20%
11%	3357	30%	27	HS	19%
52%	1359	70%	295	HS	18%
76%	1223	91%	262	HS	15%
75%	608	89%	36	EL	14%
25%	2458	38%	32	HS	13%
76%	371	86%	174	EL	10%
76%	860	85%	176	EL	9%
85%	1081	92%	297	EL-MS	7%
77%	2963	83%	75	HS	6%
93%	720	98%	83	MS	5%[a]
89%	1029	93%	109	MS-HS	4%[a]
80%	4925	82%	386	K12	2%
92%	758	93%	126	EL	1%[a]
93%	1385	93%	137	EL-MS	0%[a]
88%	1813	88%	455	EL-MS	0%
84%	1908	84%	152	EL-MS	0%
1%	327	1%	69	EL	0%
88%	3261	87%	175	MS-HS	-1%
3%	712	2%	247	K12	-1%
25%	2517	23%	43	HS	-2%
10%	3945	7%	381	K12	-3%
4%	170	1%	270	EL-MS	-3%

93%	745	88%	169	EL	-5%[a]
68%	812	63%	57	EL	-5%
25%	2517	20%	125	HS	-5%
93%	2838	87%	127	MS-HS	-6%
80%	767	74%	73	EL-MS	-6%
88%	693	81%	68	MS	-7%[a]
88%	493	79%	77	EL-MS	-9%
84%	851	75%	150	EL-MS	-9%
89%	886	79%	97	EL	-10%
81%	591	71%	115	EL-MS	-10%
93%	1831	82%	100	EL-MS	-11%[a]
93%	713	82%	44	EL	-11%[a]
83%	1080	70%	233	HS	-13%
17%	623	4%	269	EL-MS	-13%
63%	2706	46%	81	HS	-17%
90%	5183	67%	30	K12	-23%

[a] Charter school located in 1995 census tract greater than 90% White

To examine these matched comparison data yet another way, the schools were grouped into three categories: schools greater than or equal to 70% White, schools less than or equal to 30% White, and those schools falling in between (see Tables 12 and 13). Clearly, these data show charter schools are more White than the public comparison group. Twenty-six of the public schools were equal to or greater than 70% White, compared to 38 of the charter schools. That is, two-thirds of the charter schools in metropolitan Phoenix were predominantly White; less than half of the public schools were predominantly White. Described in terms of students, 75% (6493/8676) of the students in metropolitan Phoenix charter schools were in schools that were 70% or more White. In comparison, only 45% (39576/87439) of the students in the public comparison group were in schools 70% or more White.

Lastly, looking at Table 13 in isolation, the average sized charter school for the more integrated group (i.e., between 30% and 70% White) is well below half the average sized charter in either of the more segregated groups. Relative to students in the public comparison schools, charter students were more likely to be found in ethnically concentrated schools.

Table 12
Metropolitan Phoenix Traditional Public Schools

% White	No. Students	No. Schools(a)	Avg. Size
< 30%	27,368	15	1,440
30%-70%	20,495	14	1,079
> 70%	39,576	26	1,015
Totals	87,439	55	1,136

(a) In instances where the charter school served a wide grade range (e.g., K-12), multiple traditional public schools were combined to serve as the comparison school. In these cases, ethnic percentages were weighted according to size of school.

Table 13
Metropolitan Phoenix Charter Schools

% White	No. Students	No. Schools	Avg. Size
< 30%	1,404	7	201
30%-70%	744	10	77
> 70%	6,493	38	171
Totals	8,641	55	157

Educational Mission and Ethnicity

The educational missions of 22 metropolitan Phoenix charter schools that served grades 9-12 were identified as either college prep (n=12) or voc-ed (n=10). (There were 25 secondary charter schools in all, but the mission of two schools was unclear and a reservation school was removed.) The high schools fell fairly naturally into voc-ed schools that were predominantly Hispanic and college prep academies that were largely White. The 12 charter schools with college-bound curricula enrolled a total of 1,865 students, 86% (1,601) of which were White. The 10 voc-ed charter schools served a total of 1,635 students, 62% (1,012) of which were ethnic minority. Consequently, the proportion of White students in urban, college-bound charter high schools was well over two times the proportion of White students in urban, non- college-bound charter high schools.

Rural Small Town Charters

Looking at small towns in toto, there were 57 charter schools, 17 of which were under conditions that precluded ethnic separation. That is, they were either in ethnically homogeneous towns (e.g., Douglas--nearly 100% Hispanic, Nogales--nearly 100% Hispanic, Payson--nearly 100% White, and the like), or reservation schools, or insignificantly small schools. Of the remaining 40 charter schools in small towns with a variety of ethnic groups present, 18 showed significant segregation either into White college prep academies or Montessori elementary schools or voc-ed high schools. Six more appeared to be contributing to ethnic separation, and four more very small schools might contribute to segregation as well. Thus, a total of 28 rural charter schools out of 40 exhibited some degree of ethnic segregation.

Educational Mission and Ethnicity

Eight of the eleven rural charter high schools in Table 14 can be loosely classified as either voc-ed or college prep schools. The six voc-ed high schools are seen to be on average 11% more Hispanic than the traditional high school (or schools) in the same town. The two college prep academies are seen to be on average 20% more White than the traditional high school (or schools) in the same town.

Table 14
1996 Ethnic Compositions of Rural Charter and Traditional Public Schools

Town	Type	Level [a]	No. Stu.	% White	% Hisp	% AmInd.	School (range % White)	HS Mission
Avondale	Trad.	HS	3793	53%	37%	2%	2 schools (52%-54%)	
	Charter	*HS*	*103*	*27%*	*69%*	*0%*	*PPEP TEC*	*voc-ed*
Bisbee	Trad.	HS	477	54%	45%	0%	1 school	
	Charter	*HS*	*42*	*26%*	*64%*	*7%*	*PPEP TEC*	*voc-ed*
Bullhead City	Trad.	EL	2662	71%	26%	1%	4 schools (63%-86%)	
	Charter	*EL*	*72*	*96%*	*3%*	*0%*	*Young Scholars*	
Casa Grande	Trad.	EL	3962	40%	47%	7%	8 schools (17%-62%)	
	Charter	*EL*	*15*	*73%*	*20%*	*0%*	*American Grade*	
	Trad.	HS	2198	44%	38%	14%	1 school	
	Charter	*HS*	*65*	*35%*	*57%*	*3%*	*PPEP TEC*	*voc-ed*
Clarkdale	Trad.	EL-MS	396	74%	9%	16%	1 school	
	Charter	*MS-HS*	*117*	*90%*	*6%*	*3%*	*Heritage Academy*	*college*
Coolidge	Trad.	MS	466	36%	36%	18%	1 school	
	Charter	*MS*	*60*	*22%*	*27%*	*42%*	*McCray Academy*	
El Mirage	Trad.	MS	618	18%	77%	0%	1 school	
	Charter	*MS*	*15*	*73%*	*7%*	*0%*	*Bennett Acad. West*	
Elgin	Trad.	EL	115	88%	12%	0%	1 school	
	Charter	*EL-MS*	*20*	*100%*	*0%*	*0%*	*Sonita Charter*	
Flagstaff	Trad.	EL-MS	7953	62%	16%	18%	13 schools (20%-84%)	
	Charter	*EL*	*150*	*87%*	*5%*	*6%*	*Pine Forest Charter*	
	Charter	*EL*	*23*	*100%*	*0%*	*0%*	*Montessori Sunny.*	
	Charter	*EL*	*96*	*96%*	*1%*	*3%*	*Flagstaff Jr. Acad.*	
	Charter	*EL-MS*	*56*	*79%*	*9%*	*7%*	*Montessori*	
	Charter	*EL-MS*	*46*	*89%*	*2%*	*2%*	*Montessori*	
	Trad.	HS	3141	65%	13%	19%	3 schools (58%-74%)	
	Charter	*HS*	*117*	*84%*	*6%*	*7%*	*Flagstaff Arts*	*college*
Kingman	Trad.	EL-MS	5193	87%	9%	2%	9 schools (77%-91%)	
	Charter	*EL-MS*	*353*	*93%*	*5%*	*0%*	*Kingman Academy*	
Lake Havasu	Trad.	MS-HS	2729	88%	9%	1%	2 schools (87%-88%)	
	Charter	*MS-HS*	*99*	*95%*	*5%*	*0%*	*Lake Havasu Chrt.*	*voc-ed*
Page	Trad.	EL	1417	26%	2%	72%	2 schools (20%-32%)	

	Charter	*EL*	*138*	*72%*	*1%*	*26%*	*Lake Powell Acad.*	
Prescott	Trad.	EL	2250	86%	10%	3%	7 schools (62%-91%)	
	Charter	*EL*	*103*	*90%*	*3%*	*0%*	*Franklin Phonetic*	
	Charter	*EL-MS*	*148*	*93%*	*3%*	*1%*	*AZ Montessori*	
	Charter	*EL-MS*	*129*	*95%*	*2%*	*2%*	*Skyview School*	
	Trad.	MS-HS	2946	91%	6%	6%	3 schools (87%-95%)	
	Charter	*MS-HS*	*36*	*94%*	*0%*	*3%*	*Mingus Mt. Acad.*	*unclear*
	Charter	*MS-HS*	*547*	*77%*	*6%*	*15%*	*Excel Ed. Ctr.*	*unclear*
Queen Creek	Trad.	EL-HS	1370	56%	42%	1%	4 schools (52%-63%)	
	Charter	*EL*	*278*	*91%*	*5%*	*3%*	*Ben Franklin Chrt.*	
Safford	Trad.	EL	1061	44%	43%	1%	2 schools (51%-56%)	
	Charter	*EL*	*49*	*96%*	*2%*	*0%*	*Triumphant Learn.*	
	Charter	*EL*	*61*	*25%*	*72%*	*0%*	*Los Milagros*	
St. Johns	Trad.	EL-MS	743	62%	29%	9%	2 schools (61%-62%)	
	Charter	*EL-MS*	*52*	*90%*	*8%*	*0%*	*Discovery Academy*	
Yuma	Trad.	HS	7543	31%	64%	2%	4 schools (25%-33%)	
	Charter	*HS*	*73*	*15%*	*79%*	*1%*	*The Learning Ctr.*	*no data*
	Charter	*HS*	*99*	*13%*	*77%*	*1%*	*Ed. Opport. Ctr.*	*voc-ed*
	Charter	*HS*	*34*	*21%*	*71%*	*1%*	*Success School*	*voc-ed*

[a] EL = elementary, MS = middle school, HS = high school

Summary of Urban and Rural Charter Schools

In total, the ethnic compositions of 112 of the 132 charter schools that reported data to ADE in 1996 were compared to nearby public schools. Fifty-five urban charters and 57 rural charters were examined. Ten urban and 17 rural charters were located in areas that were so homogeneous (or were reservation schools, or were extraordinarily small schools) that ethnic separation was unlikely to occur, reducing the total number of charters that could potentially segregate to 85.

Detailed lists of charter schools are presented in Tables 15 and 16. They are grouped into three categories: those that contributed to ethnic separation and those that were suspect of contributing (see Table 15), and those that did not (including those that simply were not eligible) (see Table 16).

In all, 46% (21 urban, 18 rural) of the charter schools exhibited evidence of substantial ethnic separation. Adding those that were suspect of ethnic stratification raises the percentage to 61% (24 urban, 28 rural).

Table 15
1996 Charter Schools Contributing to Ethnic Separation

No.Stu.	*Significant Ethnic Separation*	*Source*	*No. Stu.*	*Suspect Ethnic Separation*	*Source*
74	Meadowbrook Villa Mont.	Figure 1	233	Gateway Community HS	Figure 7
41	Campbell Villa Mont.	Figure 1	91	Copper Canyon Acad.	Figure 13
186	Villa Montessori Main	Figure 1	40	Intelli-School #3	Figure 14b
51	Khlasa Montessori Phx	Figure 2	15	American Grade School	Table RT
270	Future Devel. & Perform.	Figure 3	15	Bennett Academy West	Table RT
269	ATOP Academy	Figure 3b	20	Sonita Charter	Table 14
237	AZ School for the Arts	Figure 3	23	Montessori Sunny.	Table 14
89	Intelli-School Phx	Figure 3	353	Kingman Academy	Table 14
247	Teen Choice Leadership	Figure 5	99	Lake Havasu Charter	Table 14
137	ABC Alt. Learning	Figure 6	103	Franklin Phonetic	Table 14
226	Scottsdale Horizons	Figure 8	148	AZ Montessori	Table 14
36	Villa Montessori Scot.	Figure 8	129	Skyview School	Table 14
262	New School for the Arts	Figure 9	547	Excel Ed. Ctr.	Table 14
174	Montessori Day Public	Figure 10			
113	Tempe Prep Academy	Figure 11			
295	AZ Career Acad. Tempe	Figure 12			
281	Heritage Academy	Figure 14ab			
115	Mesa Arts Academy	Figure 14ab			
752	Sequoia School	Figure 14ab			
244	Benjamin Franklin Mesa	Figure 15			
57	Carmel Commun. Arts	Figure 17			
81	PPEP TEC Chandler	Figure 17			
103	PPEP TEC Avondale	Table 14			
42	PPEP TEC Bisbee	Table 14			
72	Young Scholars	Table 14			
65	PPEP TEC Casa Grande	Table 14			
117	Heritage Academy Clark.	Table 14			
60	McCray Academy	Table 14			
150	Pine Forest Charter	Table 14			
96	Flagstaff Jr. Academy	Table 14			
56	Montessori	Table 14			
46	Montessori	Table 14			
117	Flagstaff Arts	Table 14			
138	Lake Powell	Table 14			
278	Benjamin Franklin QC	Table 14			
49	Triumphant Learning	Table 14			
61	Los Milagros	Table 14			
52	Discovery Academy	Table 14			
73	The Learning Ctr.	Table 14			
99	Ed. Opport. Ctr.	Table 14			

Table 16
1996 Charter Schools Not Contributing to Ethnic Separation
(Including Ineligible Charters)

No. Stu.	Charter School	Source/Type
69	Tertulia	Fig 3
43	Success School	Fig 3, 4
125	Call-A-Teen Center	Fig 3, 4
32	Mesa Learning Ctr.	Fig 4
10	Acad. Of Lifelong	Fig 4
381	Esperanza Mont.	Fig 5
27	Victory High School	Fig 5
73	Edupreneurship	Fig 8
190	AZ Career Acad. Mesa	Fig 14b
57	Ecotech Agricultural	urban
75	Intelli-School #2	urban
176	Bright Beginnings	urban
386	Horizon Charter	urban
150	AZ Montessori Glen.	urban
152	Montessori Ed. Ctr.	urban
297	Edu-Prize	urban
30	Altern. Learning Chrt.	urban
77	Challenge Charter	urban
68	Bennett Academy*	urban
175	International Studies*	urban
455	Valley Academy Inc.*	urban
97	Horizon Chrt. Perf. Arts	urban
109	Kachina Jr/Sr High*	urban
169	Kachina Elem.*	urban
137	Ventana Academic*	urban
126	Casy Country Day*	urban
100	Dragonfleye*	urban
44	Gan Yeladeem*	urban
127	Life School College Prep	urban
83	Foothills Academy*	urban
36	Mingus Mt. Academy	Table 14
34	Yuma Success School	Table 14
18	American Grade Sch. AJ	rural
52	Ashfork Middle School**	rural

44	San Luis Success School*	rural
25	Somerton Success School	rural
8	Sedona Learning***	rural
72	Mingus Springs C.V.*	rural
65	Ctr. For Acad. Success*	rural
81	PPEP TEC Douglas*	rural
387	Greasewood Springs Gan.*	rural
131	Hotevilla Bacav.*	rural
494	Hopi Jr/Sr High K.C.*	rural
110	Gila Crossing Charter*	rural
48	PPEP TEC Marana	rural
129	Pimeria Alta Learning.*	rural
43	Payson Ctr. for Success*	rural
60	PPEP TEC San Luis*	rural
108	Sedona Charter	rural
667	Shonto Charter*	rural
82	Northern AZ Acad. SL*	rural
70	Center for Acad.	rural
150	PPEP TEC Sierra Vista	rural
45	PPEP TEC Somerton	rural
18	Round Valley Alt. Chrt.	rural
37	Northern AZ Acad.Tayl.	rural
461	Greyhills Academy*	rural
525	Tol-Chii'kooh Chrt.*	rural
63	Northern AZ Acad. Win.	rural

* Located in ethnically homogeneous region
** No analogous comparison school
*** Insignificantly small

Discussion and Conclusions

A critical assumption of the map analysis is that charter schools enroll their students from surrounding or nearby neighborhoods. This assumption permitted comparisons to proximal public schools, which, unlike charter schools, must adhere to specific attendance boundaries. How can one safely make this assumption when there are no attendance boundaries for charters?

The reality is that students do not travel that far to attend charter schools. In 1997, only two charter schools provided transportation. Neither do many charter schools provide funding for transportation, and if they do, it is so modest and inconvenient (e.g., public transit passes) as to discourage large numbers from commuting. The $174 per pupil per year that charter schools receive from the state for transportation--regardless of its provision--simply does not amount to enough money for the small charter schools to sponsor

transportation for their students.

Moreover, the maximum distances parents are willing to commute naturally bound their catchment areas. Indeed, there is empirical support for this claim. Under the Scotland choice program, parents considered the distance students must travel as a major part of their decision (Adler, Petch, & Tweedie, 1989). Correspondingly, parents in the Alum Rock, California voucher experiment were more concerned with proximity than with curriculum content when selecting schools (Bridge & Blackman, 1978).

Discussion

The national and state evaluations which report that Arizona charter schools serve a proportion of ethnic minority students at a level consistent with or greater than the traditional public schools are off the mark. Their methods produce numbers and percentages in the aggregate, techniques that conceal potential evidence of ethnic separation at the level at which it should be measured. The general picture of Arizona's charter schools is that they are significantly more segregated than the traditional public schools. They not only contain a substantially greater proportion of White students, but when comparable nearby traditional public schools are used for comparison, the charters are typically 20 percentage points higher in White enrollment than the other publics. Moreover, the charters that have a majority of ethnic minority students enrolled in them tend to be either voc-ed secondary schools that do not lead to college or schools of last resort for students being expelled from the traditional public schools system.

A good deal of Arizona charter schools present scenarios that lend credence to references of charters as "creaming" or "skimming" agents. Consider, for example, that four of the six non-reservation charter schools in the affluent and highly White city of Scottsdale were positioned in its least prosperous and most ethnically mixed neighborhoods--and three of these schools were more White than proximal public schools. Moreover, a handful of charter schools catered to particular minority groups. Consider that in 1996 three charter schools accounted for the majority of all Black charter students.

Exclusionary Influences

Although Arizona's charter schools are required to admit all students for whom they have room, there is some degree of selectivity. Many charters exclusively target at-risk students or students who excel in the arts. To a significant degree, the shared characteristics by which students are presumably grouped extend beyond academic interest and ability, and toward ethnic background.

Charters are required to maintain waiting lists that are moderated on a first-come-first-served basis. The waiting lists convey a notion of fairness and randomness about student admissions, but this notion loses its value as students on these lists become more ethnically homogeneous. The fairness of waiting lists occurs in a vacuum, and applies only to those who choose to be on them.

Other subtle exclusionary practices that can vary across charters include charter-initiated parent contracts and the provision of transportation. Both shift costs on to parents, costs which not every parent can afford.

The social consequences of choice in education are mediated by the policies under which choice operates. Depending on the degree of public oversight, choice can serve

contradictory purposes. Consider two extreme scenarios. Under regulated conditions, choice can correct for severe levels of segregation and ensure the stable integration of schools (e.g., controlled open enrollment plans, magnet programs). Minneapolis, Minnesota and Cambridge, Massachusetts endorse such policies. Conversely, unregulated choice can intensify ethnic stratification by allowing parents to remove their children from integrated schools (e.g., White flight). Arizona's laissez-faire charter legislation appears to fall in this latter group. Charter laws in other states include explicit nondiscriminatory requirements. For instance, charter legislation in California and Minnesota require ethnic enrollment quotas (Brock-Nelson, 1998). It comes as no surprise, then, that charter schools in these states are less ethnically concentrated than Arizona charter schools.

The ethnic separation on the part of Arizona's charter schools, though de facto, is an insidious by-product of unregulated school choice. If parents can choose where to send their children to school, they are likely to choose schools with students of similar orientations to their own. Moreover, it is well documented that choosers (in this case, charter students and parents) differ from non-choosers in several meaningful ways, which further contributes to the stratification of students along ethnic and socioeconomic lines.

Finally, many charter schools are newly created institutions, which not only allow for parents (primarily of White students) to escape racial integration but also allow for the founders of the fledgling schools to orchestrate the escape plan. Before dismissing such a statement as conspiratorial supposition, one should consider that by far the most common form of charter school advertisement and recruitment is word-of-mouth. Word-of-mouth communication tends to remain within homogeneous groups.

Ethnic Separation and Equity

Libertarians and political conservatives alike challenge democratic notions of equality of opportunity; for them, freedom of choice is the basis for an equitable system. Beneath this ideological tenet lies less of an attempt to reduce the gap in resources between the advantaged and disadvantaged and more of attempt to promote the rights of the individual. There is a tradeoff, however, between the freedom to choose and the assurance of equality of opportunity. Separate but equal has not worked in the past, and it is doubtful that it will work now.

The claim by choice advocates that charters equalize educational opportunity by offering minority students options previously available to more advantaged (White) students does not stand up very well to the evidence here. Although it is true that many ethnic minorities are well represented by several charter schools, most are in voc-ed schools and at-risk schools of last resort. This is not to say that all of the at-risk and voc-ed charter schools do children a disservice. It is probably the case that several of these schools serve students better than their former public schools. Similarly, this is not to say that all the non-voc-ed, non- at-risk ethnocentric charter schools are poorly serving students. It could be argued that minorities are using the charter vehicle for some interesting and worthwhile purposes. However, though some students undoubtedly benefit, the majority probably do not.

Students in segregated schools lose out on the well documented academic and social benefits of integration. Beyond, and perhaps underlying, the educational benefits of integrated schools is a balance of political support. Ethnic and class-based separation polarizes the political interests which look out for neighborhood schools, which results in

further disparities in resources, quality of teachers, number of supportive parents, and the like. Schools without political support struggle, and the students suffer commensurately.

Conclusions

These analyses were undertaken to discover the existence of a phenomenon, if it existed. They were not undertaken to attach a single descriptive number to the degree of ethnic separation in the entire State of Arizona. Nor do these analyses address in the most definitive ways possible the motives, mechanisms or reasons for ethnic separation in charter schools. Such determinations must await the findings of other research, differently conceived and differently executed. This said, it is not our intention to gainsay the value and importance of the analyses here performed. They may be found, in spite of their limitations, to be adequate to serve as the basis for legal action under the Civil Rights Act, for example.

Beyond any legal accountability, do not charters have the responsibility to their parents and students (on academic and social grounds) to offer a diverse community of learners? Do they not have the civic obligation to achieve in their schools the ethnic representation of their community, given they are schools of choice with no local attendance boundaries to confine their ethnic compositions? Public schools are not necessarily held to this same standard (except in instances of court-ordered desegregation or district-initiated racial balance improvement plans), but neither are they under the same rules of choice.

The degree of ethnic separation in Arizona schools is large enough and consistent enough to warrant concern among education policymakers. But in what ways should the state intervene in cases of de facto segregation? Given the political milieu, it is doubtful that Arizona would legislate racial quotas similar to those in Cambridge and Minneapolis. At the very least, charter schools should be required to actively pursue ethnic representation. Legislation should mandate that charters delineate and put into practice strategies to attract ethnically diverse students. We have entrusted the courts to insure equality of opportunity and to remedy any existing inequalities, and this is perhaps where to turn if the executive and legislative branches fail to act. The Arizona charter experiment should proceed with caution, because if left unchecked as it is now, we will likely see even greater ethnic stratification of the public school system.

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