

**Preserving Whose Neighborhood?
The Effects of Adaptive Reuse by the Savannah College of Art & Design on
Property Value and Community Change in Savannah, Georgia**

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Abstract

The purpose of this study is to examine the effects of adaptive reuse of buildings by the Savannah College of Art and Design (SCAD) on property values and neighborhood change in Savannah, Georgia in the context of historic preservation. SCAD is one of the largest landowners in a city that is celebrated for its designation on the National Register of Historic Places, yet is heavily populated by an under-educated and poor African-American population. Using a mixed-methods approach, this research estimates changes in property value, housing composition, and socioeconomic characteristics in neighborhoods where SCAD restored buildings for use by the college.

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Preserving Whose Neighborhood? The Effects of Adaptive Reuse by the Savannah College of Art & Design on Property Value and Community Change in Savannah, Georgia

Introduction

The purpose of this study is to examine the effects of adaptive reuse of historic buildings by the Savannah College of Art and Design (SCAD) on property values and neighborhood change in Savannah, Georgia. For this study, adaptive reuse will be defined as the restoration and reuse of historic buildings originally built for occupation by a different type of land use than that for which it is currently being used. This might include the conversion of a historic warehouse into loft apartments or the use of an old train depot as a museum, among the many common examples of the adaptive reuse of historic buildings.

There are numerous accounts and case studies about historic buildings which universities have acquired, rehabilitated, and adaptively reused to serve existing needs. These studies have been piecemeal at best and lack any empirical grounding regarding the contribution that universities have with respect to the preservation the historic landmarks in the towns where they are situated. While there is at least some evidence that universities, as landholders, have had a positive impact on the preservation of local historic structures, there is a void of data dealing with the interaction between adaptive reuse by universities and the socioeconomic conditions of the urban poor who are frequently displaced by such efforts. Not able to fully articulate the scope of the consequences of university-sponsored adaptive reuse, policy makers and university administrators have been denied a firm foundation on which to make decisions regarding the development of new policies, or the revision of existing ones, in a way that will positively benefit depressed urban areas for the sake of the residents who inhabit them, preserve important historic properties, and allow universities to acquire much needed real estate in previously developed areas. This research will seek to fill this gap.

Background

Since the 1950's the City of Savannah, Georgia has undergone a significant renaissance due largely to the actions of a small group of citizens who recognized the cities' historic significance, formalized their alliance as the Historic Savannah Foundation, and lobbied both the government and other residents to preserve its unique characteristics. In 1966, 1.1 square miles of the city was designated a National Historic Landmark District, the highest district level awarded by the National Park Service, because of its unique, well preserved city plan and historic building stock.

Historic preservation is often cited as the engine that drives Savannah's \$1 billion tourism industry. While the Historic Savannah Foundation and local residents deserve much of the credit, the Savannah College of Art and Design (SCAD) has contributed

substantially to preservation efforts in the city and is an economic catalyst in its own right with most of its facilities in or adjacent to the National Historic Landmark District. SCAD's contributions to historic preservation have earned recognition from the Georgia Trust for Historic Preservation, the Art Deco Societies of America, the National Trust for Historic Preservation, the Victorian Society in America, and the American Institute of Architects.

Legally incorporated in 1978, SCAD occupies approximately 2 million square feet of office and classroom space in nearly 60 facilities that are distributed throughout Savannah's historic and Victorian districts. It is considered the unchallenged leader in the adaptive reuse of historic structures in Savannah.¹ The economic effects on the community are extensive. Note the following:

- Enrollment currently exceeds 7,400; up nearly 40 percent since 2000.
- The college's 2004-05 operating budget was more than \$180 million.
- In 2003, SCAD's economic impact in the state of Georgia was \$243 million, according to the Georgia Foundation for Independent Colleges Inc.²

While SCAD's economic and preservation contributions to the city and region are highly lauded, there is evidence that the growth may have been detrimental to the community that occupies much of the non-student housing immediately surrounding the college. Demographic data shows that in 1999 only 25% of the existing housing was owner-occupied, and 13% of the residents were African-American with incomes substantially less than that of the white population.³ This population is seriously threatened by SCAD and faces either the social trauma and inconvenience caused by displacement or increased rent as old neighborhoods with attractive architecture are being mined and refined for new purposes—student housing.

Several observations lead to this assumption:

- The number of student housing units has not increased proportionately to the increased number of students;
- Private sector developers, individuals, and speculators purchase housing and empty lots in the vicinity of SCAD and make the investment necessary to attract the students, which is then offset by increased rents;
- Students have greater resources (parents, loans, grants, roommates) than low-income individuals and are thus able to pay higher rents;
- Students demand high priced amenities such as internet access and off-street parking that contribute to increased rents in renovated structures.

Low-income families are being priced out of the market and it is unlikely that they will be able to remain in or acquire different housing within the same community. To further

¹ <http://www.scad.edu/about/index.cfm> accessed on January 9, 2006.

² All facts accessed on December 31, 2005 at <http://www.scad.edu/about/news/topstories/2005/111405.cfm>

³ Information derived from the 2000 U.S. Census, U.S. Bureau of the Census and includes Chatham County, Georgia tracts 3, 8, 9, 13, 15, 18, 19 and 24-26 in which SCAD has buildings.

complicate the matter, single-family preservation is typically upgraded for occupancy by middle- and upper-income families, leaving low-income households with few options.

This study addresses three questions:

- What demographic changes occur in neighborhoods surrounding SCAD buildings?
- How are nearby property values affected by the acquisition and renovation of SCAD buildings?
- Does proximity to SCAD buildings increase the likelihood that residential properties not owned by the university will be renovated or restored?

Though not empirically proven, it is likely that SCAD will be shown to be a neighborhood amenity adding value to nearby property. We further posit that proximity to SCAD will increase the likelihood that residential properties will be renovated or rehabilitated, pricing low-income individuals out of the market.

Literature Review

The theoretical framework draws from studies on property investment and valuation, historic preservation, and gentrification. It also focuses on research that evaluates the proximity effects of neighborhood externalities, both positive and negative, that play a substantial role when estimating the effects of adaptive re-use on property values and neighborhood change. Each of these areas is distinct, yet closely related to the others and is supported by empirical evidence.

Research on the impact of urban reinvestment is primarily dependent on the size of the investment when estimating the effects on nearby property values. Simons et al, in a study of urban reinvestment in Cleveland, Ohio, show that small scale investment has little effect on the value of adjacent homes. In larger projects, new construction has a greater impact than rehabilitation, and impacts are positive and significant in areas populated by low-income residents and non-minorities.⁴ Additional studies by the same author and others show that the positive effect of construction is spatially limited.⁵

The question remains as to the role historic preservation and adaptive reuse play as externalities: are they a positive influence or negative? Neighborhood externalities are typically defined as those variables that exist outside of an individual home and effect quality of life and economic viability within a neighborhood. A number of studies address the impacts of neighborhood externalities, and as one would expect, amenities

⁴ Simons, R.A., Ding, C., Bakhu, I. (2000). The Effects of Residential Investment on Nearby Property Values: Evidence from Cleveland, Ohio. *Journal of Real Estate Research*, 19 (1): 23-48.

⁵ Segal, D. *Urban Economics*, Homewood, IL: Richard D. Irwin, Inc., 1977; Varady, D. P., *Neighborhood Upgrading: A Realistic Assessment*, New York: State University of New York Press, 1986; Simons, R.A., Quercia, R. and Maric, I (1998). The Impact of New Residential Construction and Neighborhood Disinvestment on Neighborhood Sale Prices. *Journal of Real Estate Research*, 15 (1/2): 147-62.

such as shopping⁶ and public transportation⁷ positively impact property value and contribute to an economically stable neighborhood. Racial discrimination,⁸ crime and vandalism,⁹ and air pollution¹⁰ are documented neighborhood disamenities that negatively impact value, encouraging economic decline.

When urban reinvestment is conducted as historic preservation initiatives, the tense relationship between historic value, housing affordability, and displacement of the poor is often characterized as gentrification with a host of perceived injustices.¹¹ Werwath likens historic preservation to the mid-twentieth century Urban Renewal Movement though he concedes that the implementation tactics of the two approaches differ.¹² He argues that the results of historic preservation are even more detrimental to the poor, causing reduced economic development opportunities and higher property values.

Werwath's theory is in direct contrast to other studies that show historic preservation does not negatively impact communities. Coulson and Leichenko found that preservation efforts in Fort Worth, Texas did not alter the demographic composition of the neighborhood.¹³

Because many historic neighborhoods were developed to reflect a mixture of incomes, recreating this mixture is often a goal of comprehensive preservation proposals. Cohen identifies a mix of Historic Preservation Tax Credits and Low-Income Housing Tax Credits as a way to create mixed-income communities.¹⁴ Rypkema argues that if properly used, historic preservation techniques can repair communities by reducing the housing cost burden faced by low-income families.¹⁵ While the intent of historic preservation efforts is typically to restore areas containing rapidly deteriorating historic structures, at

⁶ Benjamin, J. and Sirmans, G. 1996. Mass Transportation, Apartment Rent and Property Values. *Journal of Real Estate Research* 12(1): 1-8.

⁷ Grass, R. 1992. The Estimation of Residential Property Values around Transit Station Sites in Washington, D.C. *Journal of Economics and Finance* 16(2): 139-46.

⁸ Nourse, P. A Rationale for Government Intervention in Housing: The External Benefits of Good Housing, particularly with Respect to Property Values, *Housing in the Seventies*, U.S. HUD. Washington, DC: U.S. Government Printing Office, 1976.

⁹ Li, M., Brown, H. (1980) Micro-Neighborhood Externalities and Hedonic Housing Prices, *Land Economics*, 54: 124-41.

¹⁰ Ridker, R., Henning J. (1967) The Determinants of Residential Property Values with Special Reference to Air Pollution. *Review of Economics and Statistics*: 246-57.

¹¹ Schill, M., Nathan, R. (1983) *Revitalizing American Cities: Neighborhood Reinvestment and Displacement*. Albany: State University of New York Press; Cohen, M. (1980) Historic Preservation and Public Policy: The Case of Chicago. *Urban Interest* 2 (2): 3; O'Loughlin, J., Munski, D. (1979) Housing Rehabilitation in the Inner City: A Comparison of Two Neighborhoods in New Orleans. *Economic Geography*, 55, January: 52-70.

¹² Werwath, P. (1998) Comment on David Listokin, Barbara Listoken, and Michael Lahr's "The Contributions of Historic Preservation to Housing and Economic Development." *Housing Policy Debate*, 9 (3): 487-495.

¹³ Coulson, E., Leichenko, R. (2004). Historic Preservation and Neighbourhood Change. *Urban Studies*, 41 (8): 1587-1600.

¹⁴ Cohen, J. (1998) Combining Historic Preservation and Income Class Integration: A Case Study of the Butchers Hill Neighborhood of Baltimore. *Housing Policy Debate*, 9 (3): 663-697.

¹⁵ Rypkema, D. (2002) Historic Preservation and Affordable Housing: The Missed Connection. National Trust for Historic Preservation.

issue is whether such renovation activities must have a gentrifying effect on existing populations.

Understanding the potential displacement effects of preservation activities, the City of Savannah, Georgia has been heralded for its efforts to minimize said effects.¹⁶ In the mid-1970s, Leopold Adler II, along with a group of citizens, created the Savannah Landmark Rehabilitation project in an effort to ensure that the revitalization of the City's historic areas did not result in massive displacement of some of the City's poorest residents. This model for historic preservation was adopted by the National Trust for Historic Preservation in its Inner City Ventures Fund which is used to promote preservation projects which positively benefit low income residents. While preservationists may be working to be more flexible and inclusive in their efforts to preserve areas inhabited by lower income residents,¹⁷ questions remain as to the abilities of such entities to continuously stave off the effects of gentrification given growing pressures from both tourism and the need for affordable housing, particular when such efforts are led by a private, rather than public entity.

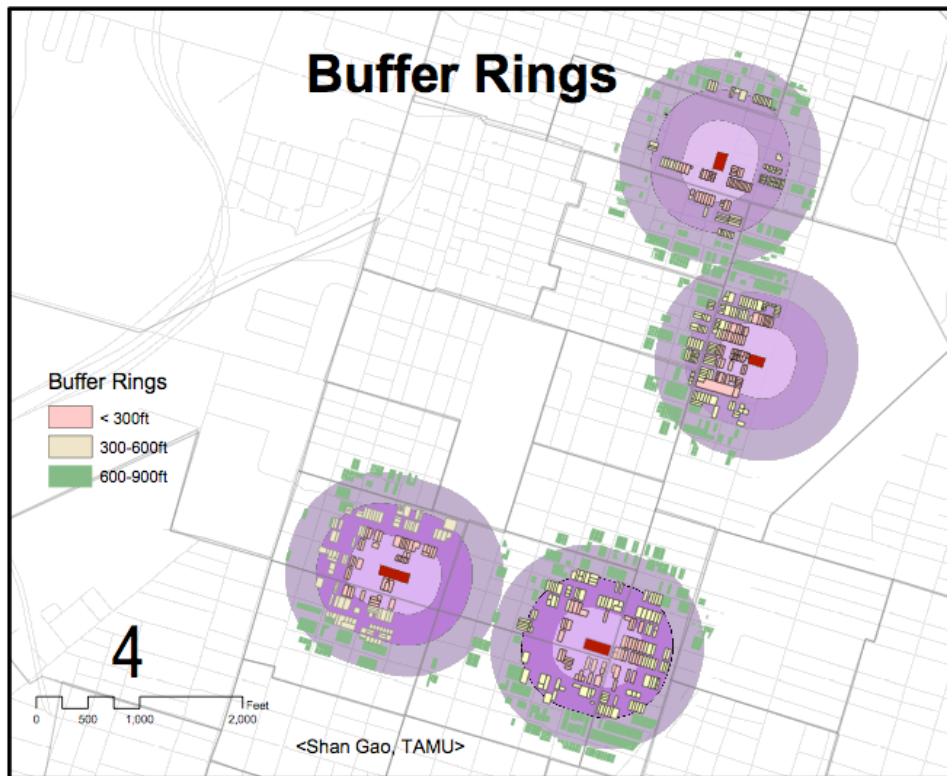
Methods and Data

Two techniques are used to gauge the impact of SCAD on historic neighborhoods in Savannah. First, a descriptive analysis compares changes for selected demographic variables from 1990 to 2000 in the National Register District. A quantitative model is then used to evaluate the relationship between four renovated SCAD buildings, nearby property values and renovation status for residential structures. Pricing, demographic, location, and property data within a 1000 feet radius of each SCAD building are integrated into standard regression models following the guidelines first established Rosen (1974).

Two of the four SCAD buildings are located in the National Register District and the others are in an adjacent area known as the Victorian District (Map 1). The NRD was the first area in Savannah to experience extensive historic preservation and renovation. Activity in the Victorian District followed and has increased rapidly in recent years.

¹⁶ Listokin, D., Listokin, B., and Lahr, M. "The Contributions of Historic Preservation to Housing and Economic Development." *Housing Policy Debate*, 9 (3): 487-495.

¹⁷ Cisneros, H. 1996. *Preserving Everybody's History*. Washington, D.C. Department of Housing and Urban Development.



The four buildings were chosen because of their historical significance, relative isolation compared to other SCAD structures, and size. While the majority of SCAD buildings are historic renovations, the college has constructed some new buildings though these are primarily outside of the historic districts. The school has acquired and renovated everything from small homes and shops to schools and a convent. Large buildings were chosen as these are expected to have a greater impact on the surrounding neighborhood than smaller structures.

- Gordon Hall - 439 East Broad in the NRD: Originally a nunnery for a Catholic church located on the same block, this 7,000-square-foot facility has been transformed into classroom and workspace for the fibers department. It was built in 1908 and acquired in 2003.
- Anderson Hall - 412 East Anderson in the Victorian District: Designed by Gottfried L. Norrman as a blend of Classical and Colonial Revival styles, this 20,478-square-foot, two-story ornate red brick building sits atop a stone/granite foundation and originally served as Anderson Street School. Built in 1896, it now houses the foundation studies program, a curriculum of introductory drawing and design courses required of students in all majors (purchased in 1988).
- Habersham Hall - 235 Habersham in the NRD: Designed by Harry P. and Kenneth McDonald, the three-story, stucco Moorish Revival style Habersham Hall, with its distinctive onion-shaped dome, once served as the Chatham County

- jail. Comprised of 42,884 square feet and built in 1886, Habersham Hall houses the athletics department and was acquired in 1989.
- Eckburg Hall - 115 West Henry in the Victorian District: Originally Henry Street School, Henry Hall was designed by William G. Preston and its construction was supervised by Gottfried L. Norrman. The three-story, 28,295-square-foot, red brick Queen Anne Revival style building features lavish terra cotta ornamentation, a gabled central pavilion, a monumental arched entrance and was built in 1892. Eckburg Hall houses the fashion department and was purchased in 1986.¹⁸

Descriptive Analysis

The descriptive analysis discusses changes in a variety of demographic variables from 1990 and 2000. Data collected from the U.S. Census includes information on race, income, educational attainment, poverty, employment, and housing tenure. For comparison purposes, the information was obtained for the National Register District and the city of Savannah.

Two distinct problems arise when comparing data from the 1990 and 2000 census. Some variables are categorized differently which can lead to reporting errors. For instance, the variable “race” in the 2000 Census can allow respondents to self-identify as being of “two or more races”, a designation not available in the 1990 Census. Further, differences in census tract boundaries may lead to problematic comparisons. While this issue does affect the boundaries for the National Register District, it is a relatively small area consisting of about ten homes. Given that, we believe any bias is minimal.

Regression Model

Extensive data on sale price, physical, time, and neighborhood characteristics are required to describe change and execute multiple regression analysis that evaluates the effect of SCAD renovations on the local community. These data were primarily acquired from the Savannah-Chatham Metropolitan Planning Commission and the 1990 and 2000 U.S. Census. Distance characteristics were generated using the Geographic Information Systems (GIS) software package ArcView.

Two dependent variables are used to evaluate the effects of proximity to SCAD buildings on nearby residential properties. Sale Price (SALE_PRICE) is used to measure effects on property value and rental rates. The continuous descriptor Effective Age (EFF_AGE) serves as a proxy for renovation. The more recently a property was renovated, the lower the effective age. Effective age is defined as the difference between the current year, 2006, and the year the structure was renovated or rehabbed. This can differ quite a bit

¹⁸ www.scad.org accessed on August 27, 2006.

from the actual age of the buildings which is often over 100 years.¹⁹ Effects are measured at all four locations. The model is expressed as:

$$SP \text{ or } EA = \alpha + \beta_1 S + \beta_2 N + \beta_3 T + \beta_4 DSCAD + \epsilon$$

where SP is sale price, EA is effective age, $\beta_1 S$, $\beta_2 N$, and $\beta_3 T$ are vectors of structural, neighborhood and time characteristics, respectively. $\beta_4 DSCAD$ is a vector of distance measurements from SCAD and the error term, ϵ , addresses variables not accounted for in the model. The complete list of variables with operational definitions is shown in Table I.

Table I: Operational Definitions

<i>Continuous Variables</i>	Definition
SALE_PRICE	Amount of last sale in dollars
BEDS	Number of bedrooms
BATHS	Number of bathrooms
YEARS_SALE	Years since last sale
EFF AGE	2006 less year renovated
AF_AM	Percent of African Americans in block group
OWNER	Percent of owner-occupied units in block group
<i>Binary Variables</i>	
ONE	One story building
TWO	Two story building
THREE	Three story building
SF	Single family
CONDO	Condominium
TOWN	Townhome
MULTI	Multi-family
ASPHALT	Asphalt roof
METAL	Metal roof
BUILT UP	Built-up roof
EX-VG	Condition of structure is excellent or very good
GOOD-AVG	Condition of structure is good or fair
FRAME	Frame construction
MASONRY	Brick construction
DIS<300	Distance from SCAD building is less than 300 feet
DIS=300<600	Distance from SCAD building is at least 300 feet but less than 600 feet
DIS>600	Distance from SCAD building is at least 600 feet
ANDERSON	Located near Anderson Hall
ECKBURG	Located near Eckburg Hall
GORDON	Located near Gordon Hall
HABERSHAM	Located near Habersham Hall
VICTORIAN	Located in the Victorian District

¹⁹ A note on the use of effective age: the effective age for each observation is no greater than 2006 less the year SCAD acquired the respective building that the observation is near. Observations with a larger effective age will not reflect the renovation activities of SCAD.

Table II shows the descriptive statistics used in the regression model including number of observations, minimum and maximum values, as well as the mean and standard deviation for each of the variables. Standard data cleaning procedures were used; outliers and observations with missing or obviously incorrect data were removed. The final data set includes 443 residential properties within 960 feet of the selected SCAD structures.

Table II: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
<i>Continuous Variables</i>					
SALE_PRICE	443	\$71,000	\$700,000	\$243,225	\$132,286
BEDS	443	1	8	2.80	1.20
BATHS	443	1	6	1.87	0.81
YEARS_SALE	443	0	17	3.41	3.37
EFF AGE	443	1	76	18.88	10.51
AF_AM	443	5	100	48.81	32.14
OWNER	443	5	48	27.92	11.16
ACTUAL	443	1	212	95.5	42.074
<i>Binary Variables</i>					
ONE	101	0	1	0.23	0.42
TWO	293	0	1	0.66	0.47
THREE	49	0	1	0.11	0.31
SF	179	0	1	0.40	0.49
CONDO	81	0	1	0.18	0.39
TOWN	63	0	1	0.14	0.35
MULTI	299	0	1	0.67	0.47
ASPHALT	303	0	1	0.68	0.47
METAL	97	0	1	0.22	0.41
BUILT UP	43	0	1	0.10	0.30
EX-VG	84	0	1	0.19	0.39
GOOD-AVG	359	0	1	0.81	0.39
FRAME	306	0	1	0.69	0.46
MASONRY	137	0	1	0.31	0.46
DIS<300	76	0	1	0.17	0.38
DIS=300<600	150	0	1	0.34	0.47
DIS>600	217	0	1	0.49	0.50
ANDERSON	101	0	1	0.23	0.42
ECKBURG	80	0	1	0.18	0.39
GORDON	98	0	1	0.22	0.42
HABERSHAM	164	0	1	0.37	0.48
VICTORIAN	181	0	1	0.41	0.49

Results

Demographic Changes

The results of the descriptive analysis show considerable shifts in the population profile of both the city and the NRD. Table III shows that Savannah experienced the same “white flight” issues that effect many American cities. Between 1990 and 2000 the white population declined by 8% and the black population increased by 6%. The experience in the National Register District, however, was quite the opposite with a 3% increase in the white population and 11% reduction in the black population. Further, in the NRD, the number of Asian residents increased from one to 4%. The unemployment rate in the city held fairly steady, hovering around 8-9% while the rate in the NRD dropped by nearly half.

Given these changes, one might expect a large increase in the number of owner-occupied housing units in the NRD.. While an increase did occur (22% to 25%), the numbers remain far below that of the city in general which is particularly surprising for an area with such rich architectural and aesthetic appeal. Likely reasons for this is the need for rental housing to accommodate the increasing SCAD student population and converting residential to retail. Further conversions have been made for short-term accommodations to house the growing tourist population.

Table III. General Demographic Statistics				
	1989 National Register District	City of Savannah	1999 National Register District	City of Savannah
<i>Population by Race*</i>				
<i>White</i>	75%	47%	78%	39%
<i>Black</i>	24%	51%	13%	57%
<i>Asian</i>	1%	1%	4%	2%
<i>Unemployment Rate</i>				
	8%	9%	5%	8%
<i>Housing Tenure</i>				
<i>Owner-Occupied</i>	22%	51%	25%	50%
<i>Renter-Occupied</i>	78%	49%	75%	50%
*2000 Census two or more races less than 1%				

Additional comparison shows the economic benefits attained in the decade between 1989 and 1999 far exceed those experienced by the rest of the city. Further, while the NRD has generally benefited, the black population has not faired nearly as well, lagging far behind whites in income, education and poverty measures.

Income for white households in the city increased by 32% and by 85% for black households from 1989 to 1999. In 1989 blacks earned less than half of that of their white counterparts. Though the gap decreased by 1999, blacks continued to make only 47% of the income of the white population. In the National Register District, the income of the white population more than doubled from \$33,321 to \$67,327, far stronger than that of the general city population. The income of the black population nearly tripled, increasing from \$8,510 to \$22,625, again showing stronger gains than the rest of the city. Regardless of these increases, black households remain far below that of whites in the NRD, with the earning power of whites three times that of the black population.

Educational attainment is another area in which blacks fair much more poorly than whites. While the city and the NRD show the number of high school and college graduates increasing, the number of individuals over 25 years of age without a high school diploma remains staggering. In 1989, fully 42% of blacks and 20% of whites in Savannah did not graduate from high school. By 1999 those figures had decreased, but remain alarming with 1/3 of blacks and 14% of whites not earning a diploma. In 1999 educational attainment among whites in the NRD is much higher than that of the city with 60% earning at least a bachelors degree and only 3% not graduating from high school. The corresponding percentage of blacks earning at least a bachelors degree is only 15% with 41% not completing high school.

The percent of black residents living at or below the poverty level are reflective of the low-incomes of that population. While the number blacks living at or below the poverty level fell from 33% to 29% citywide, the number of blacks living at the poverty level in the NRD increased 17%. The number of white residents living at or below the poverty level in Savannah increased from 9% to 11% from 1989 to 1999. The percentage of whites living at or below the poverty level in the NRD also increased from 18% to 21%. The reason for these shifts is not immediately obvious and contrary to the expectation that as incomes increase, poverty levels decrease. It may be the result of the increasing student population with less income but may also be attributed to movements to retain housing for low-income residents.

Table IV: Demographic Statistics by Race				
	1989 National Register District	City of Savannah	1999 National Register District	City of Savannah
Household Income*				
<i>White</i>	\$ 33,321	\$ 39,532	\$ 67,327	\$ 52,113
<i>Black</i>	\$ 8,510	\$ 18,370	\$ 22,625	\$ 33,991
Educational Attainment**				
<i>White</i>				
No HS diploma	9%	20%	3%	14%
High school graduate	18%	30%	13%	26%
Some college	24%	23%	20%	24%
Associate degree	4%	5%	3%	6%
Bachelor degree plus	44%	22%	60%	30%
<i>Black</i>				
No HS diploma	56%	42%	41%	32%
High school graduate	22%	28%	19%	31%
Some college	14%	17%	14%	23%
Associate degree	1%	4%	10%	4%
Bachelor degree plus	7%	10%	15%	11%
At or Below Poverty Level				
<i>White</i>	18%	9%	21%	11%
<i>Black</i>	43%	33%	60%	29%
*Derived from aggregate				
**Over 25 years of age				

The Relationship between Effective Age and Proximity to SCAD

The results of the regression analysis show most continuous performing as expected in both magnitude and direction. The reduced form model is shown in Table V. When using effective age (EFF_AGE) as the dependent variable, sale price (SALE_PRICE) shows a negative impact, indicating that as effective age increases, property values decrease. Years since last sale (YEARS_SALE) is positively related to effective age which shows that the more recently a property sold, the more likely it is to have been renovated. Both bathrooms (BATHS) and bedrooms (BEDS) effect age as expected, with the number of bathrooms increasing as homes are modernized. Homes that have not been renovated tend to have a larger number of bedrooms to house the larger families of the past. Buildings in very good or excellent condition (EXC_VG) are also more likely to have been renovated.

Single family homes (SF) have a lower effective age than townhomes (TOWN) and condominium (CONDO) indicating they were renovated earlier. This is somewhat surprising given our hypothesis that extensive renovation is taking place to accommodate increasing number of SCAD students. The low owner-occupancy rates in the NRD, however, indicate it is likely that single-family homes are being renovated as rental units. As the number of owner-occupied units (OWNER) increases, so does the effective age of structures, which supports our claim that there is a greater focus is on renovating rental properties to accommodate the student population. African-Americans (AF_AM), however, may be benefiting from the push to renovate. The data show that as the effective age of the buildings increase, the percent of African-American's in a given tract decreases. This leads us to assume that the remaining African-American population in these areas is actually living in homes with a lower-effective age than the white population, a finding clearly contrary to expectations.

Finally, the distance variables clearly show that proximity to SCAD buildings does not effect the effective age of a building. Using buildings over 600 feet away as the reference category, the model shows no difference in properties closer to SCAD buildings.

By and large, the results are satisfactory, but a note must be added regarding the reliability of the model. The adjusted R^2 of .2376 indicates the model may be underspecified. That is, there are additional variables that should be included to more accurately describe the components of effective age. A more thoroughly defined model might show different results.

Table V: Effective age dependent

	Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.	Collinearity Statistics
	B	Std. Error	Beta			VIF
(Constant)	14.84	2.90		5.12	0.00	
SALE_PRICE	0.00	0.00	-0.22	-3.99	0.00	1.75
BEDS	1.74	0.55	0.20	3.17	0.00	2.28
BATHS	-2.02	0.75	-0.16	-2.68	0.01	1.94
YEARS_SALE	-0.28	0.16	-0.09	-1.76	0.08	1.53
ACTUAL	0.07	0.01	0.29	6.65	0.00	1.14
AF_AM	-0.07	0.02	-0.22	-3.72	0.00	1.99
OWNER	0.24	0.04	0.26	5.82	0.00	1.15
DIS<300	-0.49	1.25	-0.02	-0.40	0.69	1.16
DIS=300<600	0.00	1.01	0.00	0.00	1.00	1.21
SF	-3.23	1.17	-0.15	-2.76	0.01	1.74
TOWN	-4.50	1.56	-0.15	-2.88	0.00	1.56
CONDO	-4.23	1.68	-0.16	-2.51	0.01	2.23
EX-VG	3.06	1.38	0.11	2.22	0.03	1.54
Dependent: EFF_AGE						
	$R^2 = 0.2600$	Adjusted $R^2 = 0.2376$		Std. Error = 9.1771		

The Relationship between Sale Price and Proximity to SCAD

Table VI shows the reduced form model using sale price (SALE_PRICE) as the dependent variable. Most variables perform as expected with one surprising exception. The number of bedrooms (BEDS) typically has a positive affect on value, though in this case it is not significantly different than zero. Homes in the Victorian District (VICTORIAN) are selling at a discount relative to homes in the NRD which is consistent with the fact that the NRD was the first area to experience extensive property investment and holds the highest historic designation on the National Register of Historic Places. The distance variables (DIS<300 and DIS=300<600) show no relationship between proximity to SCAD buildings and property value. Further, the adjusted R^2 , though not optimal, is strong enough to support the results.

Table VI: Sale price dependent

	Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.	Collinearity Statistics
	B	Std. Error	Beta			VIF
(Constant)	332358.60	19811.90		16.78	0.00	
BATHS	22950.90	6439.31	0.14	3.56	0.00	1.37
YEARS_SALE	-19156.50	1473.28	-0.49	-13.00	0.00	1.24
AF_AM	-1608.26	221.72	-0.39	-7.25	0.00	2.55
EFF_AGE	-1748.24	436.61	-0.14	-4.00	0.00	1.06
TWO	44039.35	11722.88	0.16	3.76	0.00	1.55
THREE	128450.44	20600.26	0.30	6.24	0.00	2.10
METAL	22376.12	11365.52	0.07	1.97	0.05	1.11
BUILT UP	73251.95	17250.98	0.16	4.25	0.00	1.31
DIS<300	-1858.28	12809.41	-0.01	-0.15	0.88	1.17
DIS=300<600	6505.95	10289.29	0.02	0.63	0.53	1.19
VICTORIAN	-30572.42	13347.99	-0.11	-2.29	0.02	2.16
Dependent: SALE_PRICE						
	$R^2 = 0.5089$	Adjusted $R^2 = 0.4964$		Std. Error = 93877.0		

Conclusion

In this study, we set out to test the hypothesis that SCAD is a neighborhood amenity which adds value to nearby property. We posited that the renovation activities of this institution in the NRD would increase the likelihood that other buildings in the neighborhood would be rehabilitated, pricing low-income individuals out of the housing market. Speaking solely on the basis of demographics, we found this position to be plausible. African Americans in the NRD experience poverty levels greater than in other parts of the city. At the same time, whites in the NRD experience increasing levels of prosperity.

The data show, contrary to expectations, that proximity to SCAD does not have a positive effect on renovation. We have been unable to show that houses near SCAD buildings are being renovated, on average, earlier than those located further from these buildings. The data do not show the anticipated catalyst effect is felt more strongly and earlier within the immediate vicinity of SCAD structures.

Though not apparent in the regression model that uses concentric rings up to 960 feet, it is possible that further research will show an effect from such renovations on market value, thereby pricing those living at or below the poverty level, particularly African Americans, out of the housing market. Demographic statistics support this position, showing an 11% decline in the African-American population in the NRD between 1989 and 1999. Even so, this decline might be attributable to other factors including the dramatic increase in tourism expenditures the city has experienced.

Additional research that extends the concentric rings around SCAD buildings or uses the entire NRD as a comparison group may show different results. Further, research focused on the effect of tourism dollars on the displacement of the urban poor is also warranted. Future longitudinal research will be necessary to completely understand the effects of SCAD's activities on property values within the NRD. In addition, research should be undertaken which further defines the variables associated with effective age. A better understanding of this concept will assist those interested in land valuation to recognize the spatial effects of large scale renovation activities like those employed by SCAD.