



**Housing
Education and
Research
Association**

CONNECTING•COMMUNICATING•COLLABORATING

Housing and Society

Volume 36 No. 1, 2009

Table of Contents

Comments from the Outgoing Executive Editor.....	1
Kenneth R. Tremblay, Jr.	
Comments from the New Executive Editor.....	3
Becky L. Yust	
Big Flipping Schemes in Small Cities? The Case of Mansfield, Ohio....	5
Katrin B. Anacker	
Are Profiles of 'Mobile Home' Residents in Georgia Changing? Evidence from 1980, 1990, and 2000 U.S. Census Data.....	29
Yoko Mimura, Stephanie E. Vanderford, Lance George, and Anne L. Sweaney	
Housing Heroines: A Tradition of Social Action Research.....	53
Ann Ziebarth	
Home Ownership and Housing Cost Burden: A Comparison of Veterans and Non-Veterans.....	75
Greg A. Greenberg and Robert A. Rosenheck	
Residential Satisfaction of Military Households in Privatized Apartment Communities.....	95
Katie E. Parks, Andrew T. Carswell, and Russell N. James III	
A House is Not A Home: Effect Of Eminent Domain Abuse On The Poor, African Americans, And The Elderly.....	115
Sandra Phillips and Marion R. Sillah	





COMMENTARY FROM THE OUTGOING EXECUTIVE EDITOR

Kenneth R. Tremblay, Jr.

Serving as Executive Editor of *Housing and Society* for six years was a privilege. I want to thank HERA members for entrusting me with the association's prime publication outlet. I also want to extend my appreciation to the authors of manuscripts who decided to submit their work to this journal and to the reviewers who gave freely of their time to help ensure that only the best manuscripts were accepted for publication. The two Associate Editors Craig Birdsong and Anne Sweaney were invaluable. Additionally, I appreciate the administrative support provided by my department head Mary Littrell and Extension director Deborah Young for their administrative support.

The journal would not have been publishable if it were not for the technical editors who formatted each issue. LaVon Blaesie was instrumental in developing the procedures for reviews, editing, formatting, and printing. For the first seven issues she kept me organized and on schedule while completing her technical editor duties. For short time periods I used graduate students as technical editors, Tracy Zarubin and Julie Chang, and as we know graduate students tend to complete their studies and move on. Fortunately, LaVon returned to help with the final issue of 2008. I thank HERA Executive Director Michael Vogel for paying bills in a timely fashion and his assistant Barbara Allen for handling the *Housing and Society* portion of the HERA Web site.

Publication of the journal is a major expense for HERA, and the association was fortunate to obtain funding from several sources over the six year period. I especially want to express my gratitude to the National Kitchen and Bath Association for partial funding of two special issues focusing on kitchen and bath research. The National Apartment Association Education Institute helped

Kenneth R. Tremblay, Jr., is Professor and Extension Housing Specialist, Department of Design and Merchandising, Colorado State University, Fort Collins, CO.

Housing and Society

Journal of the Housing Education and Research Association

Refer to manuscript submission guidelines on the HERA Web site"
www.housingeducators.org

© 2009 Housing Education and Research Association
 All rights reserved.



with a special issue on multifamily housing and residential property management. The National Consortium of Housing Research Centers partially funded a special issue highlighting its members' research efforts. Colorado State University Extension and the Healthy Homes Partnership (USDA/CSREES and HUD) also provided financial assistance. I hope that funding can continue to be secured to defray some of the publication costs as well as provide special issue topics to potentially broaden the number of authors.

In looking back at my commentary as the new Executive Editor that appeared in Volume 30, Number 1, 2003, most of what I outlined was accomplished. Two issues appeared each year in a relatively timely fashion. Changes in printers (from Center to Citizen Printers) and technical editors, a monster snow storm, and my own work load did result in some delays, and I apologize for that. The publication of the Tessie Agan Award winning graduate papers was successful as well as the continued publication of high quality scholarly articles. Not so successful was the addition of the commentary and program note publication categories. I had hoped that these categories would attract some authors without a great deal of research expertise but with insightful comments on housing or successful Extension programs.

During my six year term 12 issues of *Housing and Society* were published, for a total of 1,480 pages. There were 11 commentaries or special issue introductions and 85 articles. The average issue contained seven articles. A variety of topics were covered with housing for the elderly, homeownership issues, housing satisfaction, universal design, and housing preferences remaining as popular topics. Not surprisingly, there was an increase in the number of articles on multifamily housing and kitchen and bath design as a result of special issues. We also saw an increase in articles dealing with aspects of healthy homes such as indoor air quality, recycling, and energy. All journal editors have their own philosophy and this does have a slight influence on what is published. I tended to be more receptive to interior design articles as well as those heavy in visual content than past editors.

The journal is now in the able hands of Becky Yust as the new Executive Editor along with Marilyn Bruin and Christine Cook as Associate Editors. I wish them the best in meeting the challenges of publishing a journal. Please continue to regard *Housing and Society* as the premier journal in the housing field and your preferred journal in which to publish and read.

COMMENTARY FROM THE EDITOR

Becky L. Yust, Ph.D.

My associate editors, Chris Cook and Marilyn Bruin, and I are pleased to have been selected to steward the next three years of the journal, *Housing and Society*. We admire greatly the work that Ken Tremblay, former editor, has accomplished (see his commentary) and he has shared a wealth of information with us as we begin our term.

As these are new roles for us, I thought I would describe the review process as we have implemented it this year. When I receive a manuscript, I identify three reviewers (who have previously volunteered) for a manuscript based on their areas of interest and appropriate distribution of manuscripts to balance their workloads. They receive both a hard copy and an electronic copy of the manuscript and the evaluation form to facilitate their reviews. Once they have completed the review, their comments and their recommendations are sent to me. I divide the manuscripts between the associate editors and send them the manuscripts and the reviews. After reading the manuscript and reviewing the comments, the associate editors prioritize the main suggestions and make a recommendation to me. I then note the changes on the manuscript that are suggested by the reviewers including questions we have, I summarize the comments for the author, and I inform the author of the final recommendation based on the reviews. Depending on the recommendation, the author then makes changes and resubmits the manuscript for a second review, or makes changes and the publication process begins.

We are grateful to the members of HERA who have volunteered to serve as reviewers of manuscripts; they have completed their reviews professionally and promptly. They are committed to the review process, so that the articles that appear in the journal are of high quality, are relevant, and are informative.

We are always interested in additional reviewers, however. With a larger number of reviewers, fewer manuscripts need to be reviewed by each. The reviews generally need to be completed in four to six weeks and it is a way by which you can support the advancements in our field. If you are interested in serving as a reviewer, please let me know.

Our organization's members have broad interests including concerns about the planning, development, delivery and service of decent, safe, sanitary, affordable, ecologically sound, and appropriately designed housing for all people. Manuscripts that reflect those issues are central to our journal's interests and we encourage submissions either for articles or for notes on research, academics, and programs. For manuscript submission guidelines refer to the inside back cover of this issue, or to HERA's website at www.housingeducators.org.

And, any suggestions to us to improve the journal are always welcome.

BIG FLIPPING SCHEMES IN SMALL CITIES? THE CASE OF MANSFIELD, OHIO

Katrin B. Anacker

Abstract

This article presents a Poisson regression model that explains factors that affect neighborhoods with high proportions of potentially flipped properties based on a case study in Mansfield, Ohio. These neighborhoods were characterized by factors similar to those typical of challenged neighborhoods. Potential public policies were suggested that can address property flipping, focusing on the home buyer, the lender, the appraiser, and the inspector. Potential future public policies that address property flipping should especially focus on home buyers in neighborhoods that are characterized by variables that are significant in the model, such as a high proportion of vacant housing units, low housing unit values, and high proportions of senior or African American householders.

Introduction

Several years ago the Baltimore Sun reported on local real estate property flipping in a series of newspaper articles ("An Epidemic," 2002; "Day of Reckoning," 2001; O'Donnell, 2000, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f, 2001g; James, 2002). Over a three-year period flippers had purchased dilapidated houses and had flipped them, first selling them back and forth among themselves and, finally, to unsuspecting buyers. In some cases the flipping was done within hours. Based on this newspaper series, the Permanent Subcommittee on Investigations of the Committee on Governmental Affairs of the U. S. Senate reviewed this issue for almost a year and came to suspect that flipping was occurring not only in Baltimore but also around the U. S., based on the witnesses flown in from around the country (U.S. Senate, 2001).

A common flipping scheme works as follows. An investor purchases a property for a low price, typically in a challenged neighborhood ("Better

Katrin Anacker is a Research Assistant Professor at George Mason University, Arlington, VA.

Protect,” 2001). At first, the property is sold back and forth (i.e., it is flipped) between colluding investors or among companies in order to increase the property’s price quickly. The property is then appraised by an appraiser who may or may not be part of the flipping scheme. Even if the appraiser is not part of the scheme, there might be interest in pleasing the entity that contracted for the appraisal. Thus, even under normal circumstances the appraiser feels some pressure to return a high appraisal. The appraisal then justifies a high mortgage from a lending institution, which, again, may or may not be part of the scheme. Finally, the property is sold to an innocent investor or to an aspiring homeowner who may be buying his or her first home. In sum, property flipping

[...] involves the purchase and quick resale of homes at a huge price mark-up, often accompanied by little (or only cosmetic) work to improve the properties, in order to create the false illusion of a robust real estate market through the use of phony paperwork and deceptive sales pitches. (U.S. Senate, 2001, p. 6; see also U.S. Senate, 2000a, p. 57).

In many flipping schemes, a home buyer is stuck with a house for which the price paid exceeds fair value, and which may need costly repairs. Also, the buyer might not have an income sufficient to satisfy the inflated mortgage and property tax payments. In such cases, the buyer’s credit rating is tarnished and his or her chance of buying another home in the future declines (U.S. Senate, 2000a).

Flipping schemes affect not only individual investors or homeowners, but also communities, typically challenged ones (U.S. Senate, 2001). Conceivably, homes on a block that have not yet been flipped could be affected by adjacent properties that have been flipped, because neighboring properties are often compared in real estate evaluation. When a property is appraised too highly, there is justification for inflating the values of adjacent properties. If several investors or homeowners default on their mortgages and their properties become vacant for some time, they may be boarded up. This provides a neighborhood eyesore at best, and an invitation for illegal activities in the neighborhood at worst (Squires, 1992, 2003).

This case study focuses on real estate property flipping in Mansfield, which is located in Richland County, Ohio. Richland County’s Fair Housing/

Community Development Officer believed that properties in low-income neighborhoods had been turning over too quickly and with more rapid price increases than the market warranted (see also Benson, 2002a, 2002b, 2002c, 2002d). He asked for assistance in determining whether flipping was occurring by pinpointing suspect properties. Archived deed transfers based on the county auditor’s records served as a basis for the statistical analysis to determine whether flipping had been happening. Unlike other counties in Ohio, Richland County does not make information on properties publicly available. The obtained data set was proprietary.

The Ohio State University’s Center for Urban and Regional Analysis (CURA) pinpointed potentially suspect parcels at the census tract level (Community Research Partners and Center for Urban and Regional Analysis, 2002) and made a report accessible on its website. This article builds on CURA’s report. The author of this article hypothesizes that neighborhoods affected by potential flipping activities are characterized by housing-unit related and socioeconomic characteristics that are also typically found in challenged neighborhoods, such as a high proportion of vacant housing units, low housing values, and a high proportion of racially and ethnically underrepresented groups, among others.

The current definition of property flipping, with the three components stated above, has two components that make it illegal: the use of phony paperwork and deceptive sales pitches (U.S. Senate, 2000a, 2001). Examples of statutes that address these illegal activities are 18 U.S.C. Section 1341 (criminal mail fraud), 18 U.S.C. Section 1343 (wire fraud), 18 U.S.C. Section 1344 (bank fraud), and 18 U.S.C. Section 371 (conspiracy to defraud the U. S.) (Engel & McCoy, 2002; U.S. Senate 2000a). As of this writing, there is no statute or common law in Ohio that addresses the purchase and quick resale of homes at large price mark-ups. The question remains whether public policies should address such sales when home buyers have low incomes and/or properties are insured by the Federal Housing Administration (FHA).

This article continues with a literature review related to property flipping, including such practices as land-installment contracts. Next, data and the methodology—a Poisson regression—are discussed. This is followed by discussions of the results, public policies, and concluding remarks.

Literature Review

To the author's knowledge there is, as of this writing, no significant academic literature on property flipping. Academic discussions in the context of neighborhood decline have focused on segregation (Carr & Kutty, 2008), racial lending discrimination (Dedman, 1988a, 1988b, 1988c, 1988d, 1988e, 1988f, 1988g), redlining (Guttentag & Wachter, 1980), predatory lending (Immergluck & Wiles, 1999), and subprime lending (Engel & McCoy, 2002). However, contemporary property flipping practices closely resemble land-installment contracts and double sales schemes that were legal and common in the 1960s (Chatterjee, Harvey, & Klugman, 1974; Harvey, 1975; see also George (1955) and Hite (1979)). Both vehicles provided homeownership opportunities for those who were excluded from the conventional housing market, although the terms of these vehicles were disadvantageous in the long run—similar to the homeownership opportunity “provided” by flippers nowadays.

Land-installment contracts were legal and common in the 1960s, as described by Harvey (1975) in the case of Baltimore. Typically, a speculator purchased a house and then added a purchase and sales commission, various financing charges, and overhead costs. Next, the speculator renovated and redecorated the property and added a profit margin. Finally, he sold the house for a much higher price. Before the purchase the speculator took out two loans, one for the amount of the appraised value of the property and another one for the difference between the appraised value and the sale price. These two loans were packaged for the buyer. The speculator retained the title to the property but permitted the buyer immediate possession of the property until the second loan that covered the difference between the appraised value and the sale price was paid off. Then, a new conventional mortgage at the appraised value was taken out, at which time the purchaser retained the title to the property (Harvey, 1975).

For many African Americans, especially those of low and moderate incomes, the land-installment contract was one of the few ways to buy a home. However, due to the setup of the contract, purchasers were forced to buy homes for an inflated price, “paying ‘the black tax’ that was nothing more nor less than class-monopoly rent realized by speculators as they took advantage

of a particular mix of financial and governmental policies compounded by problems of racial discrimination” (Harvey, 1975, p. 155).

When Section 221 (d) (2), FHA's low income/no down payment program, was introduced in 1968, speculators started to favor double sales activities over land installment contracts because of the insurance aspect. Double sales occur when a property passes through the hands of two or more speculator-investors, increasing in price between transactions and finally being sold through an FHA program (Harvey, 1975). To the author's knowledge, double sales have not been discussed in the academic literature since the mid-1970s, although flipping has been discussed in governmental reports and the media more recently.

Data and Methods

The Richland County Auditor's Office made available a comprehensive set of data on property transactions in Richland County between 1998 and 2001. Unfortunately, updates or additional data were not made available. If additional data were available, additional analyses could be undertaken for the calculation of the annual appreciation rate in the housing market for multiple years and for the inclusion of more independent variables, among other things.

The transaction database provided property addresses, prices and dates of sales, appraised land and building values, and land use codes. The data were reorganized so that there was one record per property, containing all of the transactions that took place during the four-year time period. Between 1998 and 2001 there were 4,845 property transactions within the City of Mansfield (Land Use Code 510). In the data set provided by Richland County's Auditor's Office the number of buildings with two or more units that might have been flipped is very small (Land Use Codes other than 510). According to the 2000 Census, 65% of all occupied housing units in Mansfield are single-family homes, almost 10% are duplexes, and 25% fall into other categories.

Data from the U.S. Census were added to the data provided by Richland County's Auditor's Office. Information on phony paperwork and deceptive sales pitches would have made this data set ideal for a comprehensive discussion on property flipping, given the U.S. Senate's (2001) definition.

Unfortunately, the latter aspects could not be investigated because of a lack of authority and access to potential data. Thus, only one component of the definition, price mark-up, will be analyzed below.

Mansfield, a city with a population of about 50,000, was severely affected at the beginning of the 1990s when Westinghouse—a major employer—left the city. Westinghouse's departure had a negative impact both on Mansfield's local economy and its housing market. After such an incident, properties are assumed to turn over slowly and price increases are assumed to be modest. However, Richland County's Fair Housing/Community Development Officer believed that properties had been turning over too quickly and with more rapid price increases than the market warranted (James Mitchell, Fair Housing/Community Development Officer Richland County, personal communication, October 1, 2001). In other words, he believed that homes were being sold at a price mark-up atypical of the community, one of the components of the definition of property flipping that has not been pursued in the academic literature.

In order to identify those properties that were sold for a price mark-up atypical of the community, one may want to differentiate between a local average appreciation and the price appreciation of a property in question. For Mansfield, Richland County's Fair Housing/Community Development Officer believed that the local average appreciation had been near zero for several years prior to 2001. Taking a 0% appreciation as a basis for the quantitative analysis would have made a transaction with any positive appreciation a potentially flipped transaction. In order to avoid including honestly sold, positively appreciated properties while still including potentially flipped properties, a threshold of 10% annual appreciation was decided upon by local experts. Also, properties that turned over multiple times within the four-year timeframe, much faster than in comparable housing markets, were believed to have been flipped (James Mitchell, Fair Housing/Community Development Officer Richland County, personal communication October 1, 2001).

More specifically, potentially flipped properties were selected based on a methodology that factored in the time between transactions (the "quick resale" mentioned in the definition) and the appreciation between transactions

(the "huge price mark-up" pointed out in the definition): (a) properties with 10% or more annual appreciation between 1998 and 2001, (b) fewer than 180 days between transactions, and (c) three or more transactions between 1998 and 2001 (James Mitchell, Fair Housing/Community Development Officer Richland County, personal communication, October 1, 2001, and Roberta Garber, Executive Director Community Research Partners, personal communication, October 1, 2001). This methodology will be used for the model, as discussed below.

Next, the annual appreciation rate, the number of days between transactions, and the number of transactions over the four-year time span from January 1998 to December 2001 were calculated. The chosen methodology, with the threshold of three turnovers within four years, left 100 transactions, whereas a potential threshold of four turnovers within four years would have left fewer than 30 transactions. Having fewer than 30 transactions in an analysis is not desirable from a statistical point of view, since characteristics of the normal distribution are violated (Daniel & Terrell, 1995).

The dependent variable is a ratio; thus, Poisson regressions were used. Logit and probit regressions call for binary or categorical dependent variables (Hamilton, 1992). The regression model has properties as the dependent variable, expressed as a ratio of the number of properties filtered out by the methodology over the number of occupied housing units (see Table 1).

Quantitative analyses are conducted for census block groups within the City of Mansfield. All independent variables were taken from the 2000 Census (see Table 2).

The dependent variable, however, encompasses transactions from 1998 to 2001. This timing might induce simultaneity-equation bias in the coefficient estimates of some of the neighborhood variables. In this case, the coefficient estimates would capture not only the impact of a neighborhood on potential flipping activity but also the impact of potential flipping on a neighborhood (Greene, 2003). The author of this article argues that it might take some time for potential flipping activities to affect a neighborhood. Thus, transactions for four years—instead of only one year, which would have resulted in fewer cases—were taken for the analysis.

Table 1. Dependent Variable: Descriptive Statistics

Census Block Group	Number of Properties (RCAO)	Number of Housing Units (2000 U.S. Census)	Ratio (author's calculation)	Standardized Residuals
1001	0	200	0.00	0.01237
2001	1	184	0.01	-0.48381
3001	10	428	0.02	2.91842
3002	7	415	0.02	0.21846
4001	7	510	0.01	0.98958
4002	1	678	0.00	-1.81476
5001	10	1,058	0.01	0.36014
5002	3	1,053	0.01	0.21130
6001	11	906	0.00	-0.94494
6002	4	806	0.01	-1.59413
7001	8	383	0.00	0.65901
7002	7	920	0.02	-1.82899
8001	0	389	0.01	0.72364
8002	5	495	0.00	0.72416
8003	3	340	0.01	-0.07264
9001	0	1,012	0.01	-0.70607
9009	0	256	0.00	0.17116
10001	2	741	0.00	-0.21455
10002	2	1,040	0.00	-0.20848
10009	0	753	0.00	0.40207
11001	0	474	0.00	-0.60284
11002	1	789	0.00	-0.25237
12001	2	879	0.00	0.67207
12002	2	793	0.00	0.08422
13001	1	959	0.00	-0.08521
14001	4	544	0.01	0.63505
15001	0	300	0.00	-0.16207
15002	1	352	0.00	0.81106
15003	1	342	0.00	-0.38776
16001	0	351	0.00	0.07500
16002	1	483	0.00	-0.96137
17009	0	153	0.00	0.15277
18002	0	682	0.00	-0.21119
21011	0	492	0.00	-0.61862

Table 1. Dependent Variable: Descriptive Statistics (cont.)

Census Block Group	Number of Properties (RCAO)	Number of Housing Units (2000 U.S. Census)	Ratio (author's calculation)	Standardized Residuals
21012	0	581	0.00	-0.04705
21013	0	563	0.00	-0.10790
21014	6	545	0.01	2.15804
21021	0	578	0.00	0.20751
21022	0	762	0.00	-0.08988
23009	0	413	0.00	-0.67963
27004	0	357	0.00	-0.11180
<i>N</i>	41			
Sum	100			
Mean	2.44			
Std. Dev	3.248			

Sources: Richland County Auditor's Office (RCAO) and 2000 U.S. Census

Results

It is assumed that neighborhoods in which flipping activities take place are characterized by those housing-unit related and socioeconomic characteristics that are also typically found in challenged neighborhoods (U.S. Senate, 2001). This section will discuss what specific factors are associated with neighborhoods affected by potential flipping activities, based on the quantitative analysis in the previous section. Descriptive statistics are shown in Table 3.

The descriptive statistics compare the mean of the independent variables of the City of Mansfield and the State of Ohio. Compared with Ohio, Mansfield has some characteristics that are assumed to attract potential flippers. With respect to buildings, Mansfield's building vacancy rate is almost 10%, whereas Ohio's rate is only 7%; and Mansfield's housing unit value is less than \$75,000, whereas Ohio's housing unit value is more than \$100,000. With respect to demographics, Mansfield's proportion of householders 75 years and older as well as its proportion of African American householders is almost 14%, whereas Ohio's proportion of each is about 10%. Table 4 shows the results of the Poisson regression.

As mentioned above, the regression model has a dependent variable selected by the methodology. The dependent variable is expressed as a ratio. In

Table 2. Independent Variables: Specifications, Expectations of Signs, and Sources

Name of Variable	Expectation of Sign of Coefficient--Hypothesis	Supporting Literature	Source
Proportion of Vacant Housing Units	positive—flippers prey on neighborhoods that are in the process of filtering down (i.e., the higher the proportion of vacant housing units the higher the number of properties potentially affected by flipping)	Bier and Post (2003)	2000 U.S. Census SF1 H3
Age of Housing Unit	positive—flippers prey on neighborhoods that have an old housing stock (i.e., the older the housing unit the higher the number of properties potentially affected by flipping)	Ratcliff (1949)	2000 U.S. Census SF3 H35 [variable modified by author]
Housing Unit Value	negative—flippers prey on neighborhoods that have low housing unit values (i.e., the higher the housing unit value the lower the number of properties potentially affected by flipping)	Bier and Post (2003)	2000 U.S. Census SF3 H76
Average Household Size	unclear—flippers might prey on neighborhoods that have small household sizes/a low number of earners per household (?)	[none]	2000 U.S. Census SF3 H76
Proportion of Housing Units Rented Out	positive—flippers prey on neighborhoods that have a high proportion of renters/rented out properties (i.e., the higher the proportion of renters the higher the number of properties potentially affected by flipping)	Bier and Post (2003)	2000 U.S. Census SF1 H4
Housing Units without Mortgage	unclear—homes owned “free and clear” are likely to be located in neighborhoods that are characterized by a high home ownership rate, which might not be a preferred activity area of flippers (?)	[none]	2000 U.S. Census SF3 H80
Median Household Income	negative—neighborhoods with a high median household income are unlikely to be preferred by flippers (i.e., the higher the median household income the lower the number of properties potentially affected by flipping)	[none]	2000 U.S. Census SF3 P53
Proportion of Senior Householders 75 Years and Up	positive—flippers prey on senior citizens who are often impaired by physical and/or mental health issues and thus easier to mislead (i.e., the higher the proportion of senior householders the higher the number of properties potentially affected by flipping)	Senate (2001) Senate (2000a) Senate (2000b)	2000 U.S. Census SF1 H16
Proportion of African American Householders	positive—flippers prey on African Americans who often face constraints that hindered them from becoming homeowners in the past (i.e., the higher the proportion of African American householders the higher the number of properties potentially affected by flipping)	Senate (2001) Senate (2000a) Senate (2000b)	2000 U.S. Census SF1 H6

Table 3. Independent Variables: Descriptive Statistics

	City of Mansfield: Mean	Ohio: Mean
Proportion of Vacant Housing Units	9.63%	7.05%
Age of Housing Unit	44 years	38 years
Housing Unit Value	\$73,046	\$103,700
Average Household Size	2.35	2.49
Proportion of Housing Units Rented Out	39.29%	30.89%
Housing Units without Mortgage	38.71%	30.67%
Median Household Income	\$31,613	\$40,956
Proportion of Senior Householders 75 Years and Up	13.61%	10.54%
Proportion of Householders African American	13.39%	11.05%

Sources: RCAO and 2000 U.S. Census

the model the number of significant variables is five although the R-squared is high which might suggest omitted variable bias. Thus, the current results should be interpreted carefully.

With respect to building characteristics, the model has a significant coefficient with a positive sign with respect to the variable Housing Unit Vacant. This finding partly supports the hypothesis that neighborhoods with a high vacancy rate might have a high number of potentially flipped properties. The sign of the variable Housing Unit Age is insignificant in the model, not supporting the hypothesis above. This invites future research. Similar to the first variable, Housing Unit Value, the model has a significant coefficient with a negative sign. These findings also partly support the hypothesis that neighborhoods with low housing unit values might have a high number of potentially flipped properties.

With respect to households, the variable Household Size was significant, with a positive sign. This indicates that neighborhoods with large household sizes might have a high number of potentially flipped properties. Household sizes nevertheless do not indicate the number of earners. Householders 75 Years and Up was positive and significant. This confirms that neighborhoods with a high proportion of senior citizens might have a high number of potentially flipped properties. The variable African American Householder was also significant and positive, confirming that neighborhoods with a high proportion of African American householders might have a high number of potentially flipped properties.

Table 4: Regression Results (Poisson Regression)

Variable	Unstandardized Coefficient	Standardized Coefficient	T-statistic	Significance
Proportion of Vacant Housing Units	0.022	0.372	2.198	0.036
Age of Housing Unit				
Housing Unit Value	-0.00004	-0.405	-2.257	0.031
Average Household Size	0.055	0.486	2.801	0.009
Proportion of Housing Units Rented Out				
Housing Units without Mortgage				
Median Household Income				
Proportion of Senior Householders 75 Years and Up	0.033	0.404	2.839	0.008
Proportion of Householders African American	0.014	0.459	3.341	0.002
F-test	12.415			
Significance	.000			
R-Squared	.783			

Note. Only significant results shown (significance level: 5%)

Neighborhoods in Mansfield affected by potential flipping activities are characterized by those housing-unit related and socioeconomic characteristics that are typically found in challenged neighborhoods, such as a high proportion of vacant housing units, low housing values, and a high proportion of racially and ethnically underrepresented groups, among others. While this finding is not surprising (see also U.S. Senate (2001)), it might nevertheless be useful for the public policy debate that should incorporate these findings.

Public Policies

The first part of this article concentrated on the hypothesis that neighborhoods affected by potential flipping activities are characterized by those housing-unit related and socioeconomic characteristics that are also typically found in challenged neighborhoods. Results from the quantitative analyses above show that a high proportion of vacant housing units, low housing unit values, large average household sizes, and high proportions of senior and African American householders might “attract” flipping into a neighborhood.

Whereas vacant housing units might be considered an opportunity by flippers, neighborhoods with low housing unit values could be the areas into which some African American householders might consider buying. Also, some senior and/or African American householders might be characterized as having challenged judgments due to lower levels of formal education and fewer life skills, among other factors. In addition to these housing-unit related and socioeconomic characteristics, there might be characteristics related to participants in the home buying and lending process that do not deter flipping in certain neighborhoods. Examples of these participants are mortgage lenders, appraisers, and inspectors.

Even when addressing property flipping, housing-unit related and socioeconomic characteristics are difficult to change through public policies, especially in the short run. However, characteristics of the participants in the home buying and lending process might be easier to change, as will be discussed below. The following paragraphs will discuss potential public policies that can address property flipping, focusing on the home buyer, lender, appraiser, and inspector.

Potential future public policies that address property flipping should especially focus on home buyers in neighborhoods that are characterized by variables that are significant in the model, such as a high proportion of vacant housing units, low housing unit values, and high proportions of senior or African American householders. Home buyers in these neighborhoods might be first-time home buyers (except for senior householders who are assumed to be experienced) who are inexperienced in financial matters. This inexperience might be preyed upon by flippers (U.S. Senate, 2001). (Although transactions were made available by the Richland County Auditor’s Office, information on whether home buyers were first-time home buyers was not part of the data set.) Thus, it is suggested that financial literacy should be improved.

There are several ways to accomplish this goal. For example, the U.S. Department of Housing and Urban Development (HUD)-certified homeownership counseling program is open to income-eligible, first-time home buyers. It offers two components, one-on-one financial counseling and a homeownership training/life skills seminar. In the counseling component, participants’ credit reports, financial needs, money management, budgeting,

savings building, and critical financial planning strategies are analyzed. In the seminar, component issues, such as home inspection, working with a realtor, the mortgage process, and how to avoid a predatory lender, are covered. This program is not only an important resource to increase home buyers' comfort levels with financial matters, it might also prevent them from becoming victims of flipping (Kass, 2001; "H.E.L.P.," 2002; Hired & Zorn 2002; "Solid Foundations," 2001). HUD's certified homeownership counseling program should not only be offered in more communities, but it should also be made more known in neighborhoods characterized by the variables mentioned above.

Another participant in the home buying and lending process is unsuspecting lenders ("The Next," 2000; Collins, 2001a-c; Johnson, 2002). In developing policies to combat flipping it is important to keep the lending process as fast, unbureaucratic, and efficient as possible while also preventing lenders from becoming victims of property flipping. As one of the models above shows, neighborhoods potentially targeted by property flippers have low housing unit values. Because of this, many of the buyers might consult lenders to take out mortgages insured by the Federal Housing Authority (FHA). In the case of FHA-insured loans, losses are paid by the FHA and, ultimately, the taxpayer. Thus, selling FHA-insured loans becomes a risk-free exercise for lenders. This is why public policies should pay special attention to FHA-insured loans that might be issued in connection with a flipping scheme.

FHA authorizes lenders to originate FHA-insured loans, i.e., they can accept mortgage applications, obtain the employment verifications and credit histories of applicants, order appraisals, and perform other tasks that precede the loan underwriting process. About one quarter of the lenders authorized by the FHA to originate FHA-insured loans have Direct Endorsement (DE) authority. DE lenders can gather and process loan information, underwrite the loans, and make eligibility determinations without HUD's prior review (U.S. Senate, 2001).

Prior to 1983, only FHA employees had DE authority, and they underwrote most loans prior to insurance endorsement. Then, the FHA began delegating DE authority to approved lenders, although HUD still reviews selected properties and mortgage credit analyses through the post-endorsement technical review and on-site lender review processes. In

addition, at the end of the 1990s HUD established a Homebuyer Protection Plan that improved the appraisal process and introduced Credit Watch, a performance-based lender monitoring and enforcement system (U.S. Senate, 2001). The FHA began to delegate DE authority to approved lenders in the interest of a fast, unbureaucratic, and efficient lending process, but the increased incidence of property flipping shows that the system is not faultless (U.S. Senate, 2001).

Lenders have an obvious and significant financial interest in loan approval. When given DE authority they might become biased and seem to approve too many loans that are likely to default. In the case of FHA-insured loans, losses are initially paid by the FHA but ultimately paid by the taxpayer. Thus, selling FHA-insured loans can be considered a risk-free exercise for lenders.

Another problem is that many lenders are either not local or are from out of state (Ettlin, 2001). This means that lenders who are unfamiliar with local situations may not realize that there are discrepancies between true market values and appraisals, especially in neighborhoods where property values are low.

There are several options to improve this undesirable situation. First, DE authority should either be contracted out to a third party not involved in the process or resumed by the FHA—whichever option is more efficient and effective. Second, DE authority should be broken apart so that lenders with DE authority may still initiate the process, but FHA or another third party should complete it. Third, FHA should monitor mortgages in those geographical areas that might be targeted by flippers, as discussed above. Fourth, FHA should regularly screen parties that have obtained DE authority. Fifth, FHA-insured mortgages provided by non-local lenders should be appraised at the local level to avoid discrepancies between true market values and inflated appraisals. Sixth, the sales histories of past years should be included in mortgage applications in order to see the appreciation history of properties.

The home buying process also involves appraisers and inspectors ("The Next," 2000; Collins, 2001a-c; Johnson, 2002). Because appraisals often factor in some speculative aspect about future prospects of properties and their neighborhoods, especially if they are located in areas that have appreciated in the past, they tend to overvalue properties. Appraisals can fall into a gray area

in which it is difficult to determine the borderline between slightly inflated appraisals that encompass some speculative aspects about future prospects and inflated appraisals that are part of property flipping schemes. Appraisals are probably unethical when there is a vast discrepancy between appraised value and true market value. It is also probably unethical, if not illegal, when a seller asks an appraiser to increase the appraised value of a property or tells the appraiser what the property needs to be appraised at to make the deal work (Schuldt, 2001; Murray & Stoltz, 2002).

On the other hand, there have been allegations that appraisers undervalue properties in areas characterized by low incomes and/or racially and ethnically underrepresented groups. Another issue is that the precision of appraisals depends upon the quantity and frequency of previous home sales. Neighborhoods with few and infrequent transactions tend to have appraisals that are less precise (Lang & Nakamura, 1993; see also King (1981) and Quan & Quigley (1991)). Since they are usually hired by lenders, appraisers depend on them for their livelihood. If an appraisal does not satisfy a lender, the appraiser might not be consulted again. Because of this setup, honest appraisers might feel compelled to submit inflated appraisals that please the lenders who pay them ("Solid Foundations," 2001). Thus, they might stop being honest.

Appraisals are a critical component of the lending process in connection with FHA-insured mortgages, especially when loan-to-value ratios are high (U.S. Senate, 2001). Until 1994, HUD selected appraisers from HUD's FHA Appraiser Fee Panel on a rotating basis to appraise properties for each proposed mortgage (Wallace, 2000). Appraisers on the panel were required "to demonstrate a high level of experience and be knowledgeable about the appraisal process and property standards that homes being considered for FHA-insured mortgages must meet" (U.S. Senate, 2001, p. 12). At least 10% of appraisals were then reviewed by FHA employees. This practice was stopped in December 1994, when amendments to the National Housing Act delegated appraisal selection responsibilities from FHA employees to DE lenders. DE lenders are now allowed to select appraisers licensed by the state in which they practice. Flipping may entail lenders choosing certain appraisers over others in order to obtain the results they desire (U.S. Senate, 2001).

In order to reestablish the integrity of its appraisals, HUD should

resume reviewing them. In the meantime, the intended Appraiser Watch Initiative should be reintroduced. In the long run, the licensing systems of the states should be overhauled and evaluations of licensed appraisers by each state should be undertaken on a regular basis ("Appraisal Institute Pledges," 2001a; "Appraisal Institute Calls," 2001b; "Solid Foundations," 2001).

Other participants in the home buying process are inspectors, and public policies should pay close attention to them in connection with FHA-insured mortgages. At present, the FHA does not require home buyers to obtain home inspections as a prerequisite to obtaining FHA-backed mortgages, although they emphasize that home inspections are important. Anecdotal evidence suggests that some flippers discourage potential home buyers from obtaining home inspections, telling them that their homes were inspected when they were not, undertaking and signing home inspection forms themselves, telling them that appraisals are inspections, and so on (U.S. Senate, 2000a, 2001).

Home inspectors are mostly independent specialists who work for fees that they receive directly from the home buyer. In cases of flipping, many victims do know that it is wise to get a home inspection, but they might not have known about independent (i.e., third party) home inspectors. Also, some home buyers do not have the money to pay for a home inspection.

The fact that home inspections cost money often discourages low-income home buyers from obtaining them. However, home inspections are a critical component within the home buying process. Many cases of property flipping would be prevented by making a home inspection mandatory (U.S. Senate, 2000a). In order to make homeownership for low-income home buyers attainable, fees for home inspections could be partly subsidized by the public sector and partly loaned to prospective home buyers by an independent third party who is not involved in the process ("Solid Foundations," 2001).

Although the focus of policies should be to prevent flipping from happening in the first place, policies should also address situations after flipping has occurred. This may be especially important to protect the credit rating of victimized home buyers. In cases of flipping, homeowners often default on their mortgages. Thus, their credit scores are significantly harmed, making it difficult, if not impossible, to obtain another mortgage ("\$5 Million," 2002;

O'Donnell, 2001f; Newman, 2002). HUD suggests that in cases in which flipping has occurred, lenders should issue so-called credit repair letters that are designed to help ensure that victims' credit records are not harmed (U.S. Senate, 2001). Since lenders could be part of a flipping scheme, requesting that they issue credit repair letters might be a biased approach. Instead, somebody unbiased in the process, such as HUD, should issue the letters. According to HUD's suggestion, credit repair letters would only be issued to victims of schemes in which the perpetrators are successfully prosecuted, meaning that they would be of limited assistance.

Limitations, Future Research, and Conclusion

This article presents a Poisson regression model that explains factors that affect neighborhoods with high proportions of potentially flipped properties based on a case study in Mansfield, Ohio. These neighborhoods are characterized by factors similar to those typical of challenged neighborhoods. In the case of Mansfield, quantitative results indicate that Household Size and the Proportion of African American Householders are very important, as these variables were significant in the model. The Proportion of Vacant Housing Units, the Proportion of Householders 75 years and Up, and the Value of the Housing Unit were important variables in the model, among other variables.

The current model is very limited since it is based on a data set that only contains transactions from 1998 to 2001—the ideal data set would contain transactions for many years, ideally overlapping with several Census years, for example 1980, 1990, and 2000. The current model suffers from simultaneity-equation bias which should be corrected in future models. The current model also does not incorporate a lag time indicator that indicates when potential flipping activities affect the neighborhood. The current model is weak as there are only five significant variables that explain an R Squared of .783, probably indicating omitted variables.

Future research should focus on additional variables currently not available from the U.S. Bureau of the Census. Future research activities should also be conducted in similar communities, as well as larger cities, to find out whether the variables discussed above or different variables, such as variables

related to lending, explain flipping, and to gain more insights on property flipping in general.

Although flipping was defined by the U.S. Senate, its current definition is only descriptive. Because it focuses on phony paperwork and deceptive sales pitches as criteria, it will not help to detect it quickly enough. Victims of flipping not only need to realize that they have been victimized, they also need to step forward. However, some victims might be reluctant and discouraged to do so because their experience was traumatic, the burden of proof is cumbersome, or fees are not affordable in terms of time and resources. Thus, some victims might decide not to start a potential prosecution process in the first place, and if they do prosecution might take a long time.

Real estate property flipping often involves several actors who might not be aware of their part in a flipping scheme. Current public policies try to keep the home buying process as fast, unbureaucratic, and efficient as possible. However, flipping activities in Baltimore have shown that the system is not faultless. Future public policies should focus on improving homeownership counseling and on increasing oversight of lenders, appraisers, and inspectors in connection with FHA-insured mortgages.

According to government reports (most of them were written before September 11, 2001) local and federal law enforcement have traditionally been reluctant to prosecute flipping and other types of mortgage fraud cases because they are highly technical and difficult to prove. The work undertaken in Mansfield shows that questionable property transactions can be relatively easily identified, forming the basis for suggested future policies and further research in connection with real estate property flipping in other communities.

References

- Appraisal institute pledges support to HUD Secretary in solving predatory lending and fair housing issues. (2001a, May 14). *PR Newswire*, pp. na.
- Appraisal institute calls upon National Credit Union Administration to retain current appraisal threshold. (2001b, May 14). *PR Newswire*, pp. na.
- Benson, D. (2002a, February 10). Some lenders seek prey. *Mansfield News Journal*, pp. na.
- Benson, D. (2002b, February 10). Area agents concerned about fair lending. *Mansfield News Journal*, pp. na.

- Benson, D. (2002c, February 10). Salesmen often innocent. *Mansfield News Journal*, pp. na.
- Benson, D. (2002d, February 10). AARP fights against predators. *Mansfield News Journal*, pp. na.
- Better Protect Low-Income Home Buyers (2001, December 10), *The Morning Call (Allentown)*, pp. na.
- Bier, T., & Post, C. (2003). *Vacating the city: An analysis of new homes vs. household growth*. Washington, DC: The Brookings Institution. The Living Cities Census Series.
- Carr, J. H., & Kutty, N. (Eds.) (2008). *Segregation: The rising costs for America*. New York, NY: Routledge.
- Chatterjee, L., Harvey, D., & Klugman, L. (1974). *FHA policies and the Baltimore City housing market*. Baltimore, MD: na.
- Collins, B. (2001a, May 5). FHA lenders face scrutiny. *National Mortgage News*, pp. na.
- Collins, B. (2001b, May 21). Lenders resist pressure to write down Baltimore loans. *National Mortgage News*, pp. na.
- Collins, B. (2001c, September 10). HUD proposes measures to reduce FHA defaults. *National Mortgage News*, pp. na.
- Community Research Partners and Center for Urban and Regional Analysis. (2002). *Analysis of residential property sales in Mansfield, Ohio*. Report. The Ohio State University. Retrieved December 25, 2008, from www.communityresearchpartners.org/uploads/publications//Mansfield%20Report%20Final.pdf
- Daniel, W. W., & Terrell, J. C. (1995). *Business statistics*. Boston et al., MA: Houghton Mifflin Company.
- Day of reckoning. Flipping: Federal flipping charges could help weed out nefarious lending practices in Baltimore. (2001, April 30). *The Baltimore Sun*, pp. na.
- Dedman, B. (1988a, May 1). The color of money: Atlanta blacks losing in home loans scramble: Banks favor white areas by 5-1 margin. *The Atlanta Journal-Constitution*, p. A1.
- Dedman, B. (1988b, May 1). The color of money: A tale of two neighborhoods, one black and one white. *The Atlanta Journal-Constitution*, p. A14.
- Dedman, B. (1988c, May 1). The color of money: How study of home loans in metro Atlanta was carried out. *The Atlanta Journal-Constitution*, p. A16.
- Dedman, B. (1988d, May 2). The color of money: Southside treated like banks' stepchild: Blacks may shun some home-loan lenders because they're

- shunned first, critics say. *The Atlanta Journal-Constitution*, p. A1.
- Dedman, B. (1988e, May 2). The color of money: Poor may be left behind by bank deregulation: Basic services lagging as institutions court the wealthier clients. *The Atlanta Journal-Constitution*, p. A5.
- Dedman, B. (1988f, May 3). The color of money: A test that few banks fail – in federal eyes: Regulators say 98 percent obey lending law, but skeptics say communities shorted. *The Atlanta Journal-Constitution*, p. A1.
- Dedman, B. (1988g, May 4). The color of money: City hall clout could sweeten home-loan pot: Municipal deposits a bargaining chip, activists contend. *The Atlanta Journal-Constitution*, p. A9.
- Engel, K. C., & McCoy, P. A. (2002). A tale of three markets: The law and economics of predatory lending. *Texas Law Review* 80 Tex. L. Rev. 1255. Retrieved September 3, 2003, from http://web.lexis-nexis.com/universe/document?_m=4876462eee4b7a513593c322d5def8b7&_docnum=1&wchp=dGLbVtz-zSkVA&_md5=7b3b6ff4e130d5644f90edd8cfc05190.
- An epidemic of defaults. (2002, July 16). *The Baltimore Sun*, pp. na.
- Ettlin, D. M. (2001, August 17). Man sentenced in house scheme and ordered to pay \$1.5 Million. *The Baltimore Sun*, p. na.
- \$5 Million fund spells relief for victims of property-flipping. (2002, June 25). *Associated Press State & Local Wire*, pp. na.
- George, H. (1955). *Progress and poverty*. New York, NY: Robert Schalkenback Foundation.
- Greene, W. H. (2003). *Econometric analysis*. Upper Saddle River, NJ: Prentice Hall.
- Guttentag, J. M., & Wachter, S. M. (1980). Redlining and public policy. New York University. Graduate School of Business Administration. Salomon Brothers Center for the Study of Financial Institutions. Monograph Series in Finance and Economics. Monograph 1980-1.
- Hamilton, L. C. (1992). *Regression with graphics: A second course in applied statistics*. Belmont, CA: Duxbury Press.
- Harvey, D. (1975). Class-monopoly rent, finance capital and the urban revolution. In S. Gale & E. G. Moore (Eds.), *The manipulated city: Perspectives on spatial structure and social issues in urban America* (pp. 145-198). Chicago, IL: Maaroufa Press.
- H.E.L.P. for Baltimore flipping victims. (2002, May 11). *The Daily Record*, pp. na.
- Hirad, A. & Zorn, P. (2002). Prepurchase homeownership counseling: A little

- knowledge is a good thing. In N. P. Retsinas & E. S. Belsky (Eds.), *Low-income homeownership: Examining the unexamined goal*, (pp. 146-174). Cambridge, MA and Washington, D.C.: Joint Center for Housing Studies and Brookings Institution Press.
- Hite, J. C. (1979). *Room and situation: the political economy of land-use policy*. Chicago, IL: Nelson-Hall.
- Immergluck, D., & Wiles, M. (1999). *Two steps back: The dual mortgage market, predatory lending, and the undoing of community development*. Chicago, IL: Woodstock Institute.
- James, M. (2002, April 7). Chasing a new 'path of destruction': Investigators accuse convicted swindler in flipping schemes. *The Baltimore Sun*, pp. na.
- Johnson, M. (2002, May 6). Prosecutor proved himself on tough cases. *Milwaukee Journal Sentinel*, pp. na.
- Kass, B. L. (2001, October 20). Beware of fraud in "flipping schemes." *The Washington Post*, pp. na.
- King, A. T. (1981). *Discrimination in mortgage lending: A study of three cities*. New York University. Graduate School of Business Administration. Salomon Brothers Center for the Study of Financial Institutions. Monograph Series in Finance and Economics. Monograph 1981-5.
- Lang, W. W., & Nakamura, L. I. (1993). A model of redlining. *Journal of Urban Economics*, 33, 223-234.
- Murray, T. D., & Stoltz, M. (2002, June 22). Mortgage fraud probes disclosed. Hundreds of Cuyahoga homes possibly involved in schemes. *The Plain Dealer*, pp. na.
- Newman, R. (2002, June 25). Better deal worked out for cheated home buyers. Corzine announces plan by U.S. and banks. *The Record*, pp. na.
- The next frontier in mortgage fraud: The threat within (2000, September 5). *Credit Risk Management Report*, pp. na.
- O'Donnell, J.B. (2000, December 3). Flippers fleece an unwary city. Homebuyers lose their dreams, lenders lose millions, and the foreclosures leave neighborhoods rotting. *The Baltimore Sun*, pp. na.
- O'Donnell, J.B. (2001a, April 27). 16 charged in flipping properties. Prosecutors say scheme cost FHA nearly \$4 million. 58 area deals examined. Perry Hall agent said to have grossed \$1.4 million in deals. *The Baltimore Sun*, pp. na.
- O'Donnell, J.B. (2001b, May 15). Housing fraud still high, U.S. Senate panel told. Federal efforts have failed to prevent thousands of flipping deals, officials say. *The Baltimore Sun*, pp. na.
- O'Donnell, J.B. (2001c, July 19). Probation given in conviction on property flipping. Overlea man is spared federal prison sentence because of ill health. *The Baltimore Sun*, pp. na.
- O'Donnell, J.B. (2001d, July 28). Man gets 21 months for flipping scheme. 2 others plead guilty in separate case. *The Baltimore Sun*, pp. na.
- O'Donnell, J.B. (2001e, September 3). Guilty pleas expected in flipping case. Perry Hall broker to admit to property scheme, lawyers say. Co-defendants make deals. False papers used for \$4.4 million in mortgages, U.S. says. *The Baltimore Sun*, pp. na.
- O'Donnell, J.B. (2001f, September 11). Forest Park "flipping" suit settled. Woman to receive mortgage reduction. *The Baltimore Sun*, pp. na.
- O'Donnell, J.B. (2001g, September 22). City Man pleads guilty to arson conspiracy in property scheme. Fire was set at rowhouse after "flipping" plan failed, prosecutors say. *The Baltimore Sun*, pp. na.
- Quan, D. C., & Quigley, J. M. (1991). Price formation and the appraisal function in real estate markets. *Journal of Real Estate Finance and Economics*, 4, 127-146.
- Ratcliff, R. U. (1949). *Urban land economics*. New York, NY et al.: McGraw-Hill Book Company.
- Schuldt, G. (2001, November 30). Man linked to case files bankruptcy. He was associated with company involved in property flipping. *Milwaukee Journal Sentinel*, pp. na.
- Solid foundations to help victims. (2001, May 21). *National Mortgage News*, pp. na.
- Squires, G. D. (1992). Community reinvestment: An emerging social movement. In G. D. Squires (Ed.), *From redlining to reinvestment: Community responses to urban disinvestment*, (pp. 1-37). Philadelphia, PA: Temple University Press.
- Squires, G. D. (2003). Introduction: The rough road to reinvestment. In G. D. Squires (Ed.), *Organizing access to capital: Advocacy and the democratization of financial institutions* (pp. 1-26). Philadelphia, PA: Temple University Press.
- U.S. Senate. (2000a). Committee on Appropriations. *Form of real estate fraud known as flipping: Hearing before a subcommittee of the Committee on Appropriations*. 106th Cong., 2nd sess.
- U.S. Senate. (2000b). Committee on Governmental Affairs. *HUD's government-insured mortgages: The problem of property flipping. Hearing before the*

Permanent Subcommittee on Investigations. 106th Cong., 2nd sess.
 U.S. Senate. (2001). Committee on Governmental Affairs. *Property "flipping": HUD's failure to curb mortgage fraud. Report prepared by the minority staff of the permanent subcommittee on investigations of the Committee on Governmental Affairs United States Senate*. 107th Cong., 1st sess.
 Wallace, K. (2000). Home cheat home. *Mother Jones*, 25, 15-16.

ARE PROFILES OF 'MOBILE HOME' RESIDENTS IN GEORGIA CHANGING? EVIDENCE FROM 1980, 1990, AND 2000 U.S. CENSUS DATA

Yoko Mimura, Stephanie E. Vanderford, Lance George, & Anne L. Sweaney

Abstract

This study used U.S. Census data to perform a comparative assessment of socio-demographic profiles between residents of mobile or manufactured homes and site-built construction. It also provides a comparison between the two types of residents for the time period 1980 to 2000 in the state of Georgia. Particularly, mobile and manufactured home residents are compared to those in single- and multifamily site-built homes. Results suggest that, increasingly, lower-income households, including Hispanic households, are living in mobile and manufactured homes as opposed to comparable single-family site-built homes. In addition, an increasing number of larger households, households headed by African Americans, and households headed by older individuals are living in mobile and manufactured homes relative to multifamily site-built homes.

Introduction

Much like the nation as a whole, Georgia is experiencing an affordable housing crisis. In 1999, 35.4% of renter households in Georgia were cost burdened, meaning they spent 30% or more of their monthly income toward rent (U.S. Bureau of the Census, 2000c). In 1999, 24.6% of Georgia households paying mortgages on owner-occupied housing were cost burdened (U.S. Bureau of the Census, 2000d). Overall, rates of being cost burdened were

Yoko Mimura is a Research Professional and Anne Sweaney is a Professor, both in the Department of Housing and Consumer Economics, University of Georgia, Athens, GA; Stephanie Vanderford is with Providence Day School, Charlotte, NC; and Lance George is with the Housing Assistance Council, Washington, DC. This project was funded partially by the Georgia Agricultural Experiment Station in the form of a grant to the fourth author. The authors thank Al Albertson of PDQ software for assistance in using the U.S. Census data, Jack Reeves for statistical consultation, and Ginger Vickery for editorial assistance. An earlier version of this study was presented at the Southern Demographic Association 2004 Annual Meeting, in Hilton Head, South Carolina.

much higher among lower-income than among higher-income Georgians, as shown in Table 1.

Table 1. Rates of Being Cost Burdened by Income Group and Tenure, 1999

Income Range	Percent of Renter Households that were Cost Burdened	Percent of Owner Households that were Cost Burdened
Less than \$10,000	66.1	65.9
\$10,000 to \$19,999	67.4	50.1
\$20,000 to \$34,999	38.0	41.7
\$35,000 to \$49,999	N/A	24.8
\$35,000 or More	4.7	N/A
\$50,000 to \$74,999	N/A	10.8
\$75,000 or More	N/A	3.4

Sources: U.S. Bureau of the Census (2000c, 2000e)

Manufactured housing can offer a feasible approach to increasing the supply of housing that is affordable to low- and middle-income households. As the cost of traditional site-built housing rises, manufactured housing remains an affordable option to help more Americans realize their dream of homeownership without a heavy financial burden. The results of a hedonic price comparison of manufactured homes and comparable site-built homes indicated that, on average nationally, manufactured home prices were less than one third of site-built home prices, *ceteris paribus* (Vanderford, Mimura, & Sweaney, 2005).

To clarify, the terms manufactured housing and mobile homes, although often used interchangeably, actually refer to two different examples of factory-built housing. Manufactured housing refers to homes built after June 1976 in accordance with the stringent Housing and Urban Development (HUD) Manufactured Housing Construction and Safety Standards Code, which is why they are often referred to as HUD-Code homes (Apgar, Calder, Collins, & Duda, 2002; Suchman, 1995). A manufactured home under the HUD Code is defined as a movable dwelling, eight feet (approximately 2 m 44 cm) or more wide and 40 feet (approximately 12 m 19 cm) or more long, that is designed to be towed on its own chassis, has transportation gear integral to the unit in place when it leaves the factory, and does not need a permanent foundation (Georgia Department of Community Affairs, 2002). All other forms of factory-

built (or industrialized) housing, such as modular and panelized housing, are built according to state and local building codes and are not considered to be manufactured houses or mobile homes (Apgar et al., 2002).

Although by definition, only those homes built before June 1976 are officially mobile homes, many people still use the term to refer to manufactured homes (Apgar et al., 2002). When possible, manufactured and mobile homes are distinguished in the literature review that follows, as well as in some of the descriptive data analysis. However, both types of housing were grouped into one category and called mobile homes for the regression analysis; this decision is explained later.

Despite cost advantages, the modern manufactured housing industry faces challenges. Primarily, many people have negative perceptions of mobile and manufactured homes and their residents. While not based on fact, such negative perception may prevent some homebuyers from choosing manufactured housing. Though much maligned the quality, safety, and size of today's manufactured housing units have improved markedly over recent decades, making stereotypes inappropriate for modern HUD-Code manufactured homes (Apgar et al., 2002). While structural characteristics have allowed modern manufactured homes to appear more like site-built homes, preliminary evidence indicates that the characteristics of residents are also changing. Despite these changes, financing in the manufactured home market had not advanced and had many downsides when compared to site-built home financing (Buchholz, 2005). The lack of changes in the area of financing may continue to turn some segments of the population away from manufactured housing. Therefore, this research examined changes in the demographic and economic profiles of the residents of mobile/manufactured and site-built (both single- and multi-family) homes in Georgia between 1980 and 2000.

Review of Literature

According to the 2000 Census, at the turn of the century there were approximately 8.8 million mobile or manufactured homes in the United States, which represented 7.6% of the total housing stock (U.S. Bureau of the Census, 2000a). Over 500,000 more manufactured homes had been placed by

the end of 2003 (U.S. Bureau of the Census, 2004c). The South is the largest regional market for manufactured housing, partially because of favorable zoning laws (Jovan & Joseph, 1997) and relatively large populations of lower-income households, immigrants, and retired persons (Apgar et al., 2002). The South contains 55% of all manufactured housing in the United States (Apgar et al., 2002). In Georgia, 12% of the housing stock was comprised of mobile or manufactured homes in 2000 (U.S. Bureau of the Census, 2000a). Four of the 10 counties in the nation with the highest concentrations of manufactured housing in 2000 were in Georgia (Nitscheke, 2004). Further, manufactured housing is more popular in rural areas than in urban areas. Nationally, a majority of this type of housing is located in non-metropolitan areas (Housing Assistance Council, 2000), whereas mobile and manufactured housing comprised 18% of all housing units in 2000 (Nitscheke, 2004).

Costs of Manufactured and Site-Built Homes

The many benefits of factory construction such as speed, protection from weather and theft/vandalism, ability to order supplies in bulk have made manufactured housing substantially less expensive than site-built housing (U.S. Department of Housing and Urban Development, 2001). In 2003, the average sales price, including installation but excluding land, of new multi-section manufactured homes was \$59,800. The average price of a new multi-section manufactured home in Georgia that year was even lower—\$55,700 (U.S. Bureau of the Census, 2004a). Comparatively, the average sales price for new single-family homes in 2003 was \$246,300 across the U.S. and \$208,900 in the South (U.S. Bureau of the Census, 2004b). A study comparing home prices between HUD-Code homes and comparable site-built homes in areas located outside of Metropolitan Statistical Areas (MSAs) found that, *ceteris paribus*, manufactured homes were nearly 70% less expensive than site-built homes (Vanderford et al., 2005).

Because of its lower cost, manufactured housing offers the potential of homeownership to more Americans. In a country where there is a shortage of affordable housing, manufactured housing has been one of the most prevalent types of housing affordable to low- and middle-income Americans in many areas of the country. In 1999, only 44% of all owner-occupied housing units were considered affordable to households earning at or below 80% of the area

median income. Two-thirds of all such affordable homes added to the housing stock between 1997 and 1999 were manufactured homes. Manufactured housing has been particularly important in contributing to homeownership among households with very low incomes (less than 50% of the area median income). Between 1993 and 1999, 23% of the growth in homeownership among very-low-income households came from manufactured housing. Among those very-low-income households, Southern households and rural households experienced even greater growth in homeownership due to manufactured housing—30% and 35% of the total growth, respectively. And for rural, Southern, very-low-income households, manufactured housing accounted for 63% of the growth in homeownership between 1993 and 1999 (Apgar et al., 2002).

Perceptions of Residents of Mobile and Manufactured Homes

Research has indicated that perceptions of residents of manufactured homes tend to be different than reality. Using two surveys in non-metropolitan counties of Virginia, Beamish, Goss, Atilis, & Kim (2001) compared perceptions of single-section and double-section manufactured home residents to the actual characteristics of the residents. Residents of single-section housing were more educated, had higher incomes, were more likely to be White and married, were more likely to own both their home and their land, and were less likely to live in a mobile home park than the characteristics perceived by manufactured housing residents and by other community members. Similarly, residents of double-section manufactured homes had higher education levels, were more likely to be married, and were less likely to live in a mobile home park than what was perceived.

The aforementioned study (Beamish et al., 2001) also compared perceptions expressed by manufactured home residents with those expressed by other community members. In general, residents of other types of housing had very different views of manufactured homes than did people who lived in manufactured housing. Respondents who did not live in manufactured homes were less likely than manufactured home residents to perceive single-section and double-section manufactured home residents as middle class, local, and socially well behaved. Regarding education and housing tenure, manufactured housing residents had more accurate impressions of double-section residents than did

other community members. The authors concluded that the inaccurate views that community members held about manufactured housing residents were likely to be based on images associated with older trailers and mobile homes.

Negative stereotypes of mobile home residents may result in some homebuyers not choosing modern manufactured housing, either because they misunderstand the housing or because the lack of general acceptance limits its availability in their area. Negative perceptions have led many elected officials and housing policymakers to restrict manufactured housing by means of zoning and other regulations (U.S. Department of Housing and Urban Development, 2005). In fact, the federal government does not limit local governments' abilities to regulate where manufactured homes may be placed (Georgia Department of Community Affairs, 2002). Such restrictions make it more difficult for potential customers to purchase manufactured housing and live where they would like. Beamish et al. (2001) suggested that much of the responsibility of advocating for manufactured housing as a viable form of affordable housing lies with state and local governments. Providing consumers, policymakers, and elected officials with updated facts about current manufactured housing and its residents could help increase the acceptance and availability of manufactured housing in Georgia.

Residents of Mobile, Manufactured, and Site-Built Homes

Over 18 million Americans, including nearly one million Georgians, lived in mobile or manufactured homes in 2000 (U.S. Bureau of the Census, 2000b). The stereotypical mobile or manufactured homeowner is a first-time homebuyer, a retired individual or couple, or a low-income family. In the late 1990s, the majority of manufactured homes were purchased by consumers with lower-than-average incomes living in the South and Southwest regions of the United States (Jovan & Joseph, 1997). Increasingly, however, as manufactured housing quality has improved, manufactured homes have been purchased by a wider range of individuals than in the earlier years of the industry (Apgar et al., 2002).

The profile of a typical manufactured homeowner appears to be growing more similar to that of homeowners in general; nonetheless, differences still exist. Purchasers of manufactured housing are usually younger (first-time homebuyers) or older (retirees) than purchasers of site-built housing. Among manufactured home buyers in 1998 and 1999, 12% were under 25

and 13% were over 64; the comparable figures for site-built home buyers were five percent and seven percent, respectively (Apgar et al., 2002). More non-Whites are purchasing manufactured housing than ever before. In fact, recently, ownership of manufactured homes has grown faster among African Americans and Hispanics than among Whites. Currently, distributions of African Americans, Hispanics, and Whites differ little across manufactured and site-built homeowners (Apgar et al., 2002).

According to a study conducted by Foremost Insurance Group (2002), characteristics of manufactured home owners were very different from people's stereotypes of that group and were more similar to characteristics of site-built home residents. In 2002, the median household income among manufactured home residents was just under \$29,000. Furthermore, 55% of householders were employed full-time, and 30% were retired. Seventeen percent of householders had less than a high school diploma, and 18% had a college degree. The most common household configuration was a household of two members, and over half (56%) of the householders were married.

Summary

In summary, mobile and manufactured homes are relatively more popular in the South, including Georgia, than in other regions of the country (Apgar et al., 2002; Jovan & Joseph, 1997; U.S. Bureau of the Census, 2000a). They are far less expensive than otherwise equivalent single-family site-built homes (U.S. Bureau of the Census, 2004a; U.S. Bureau of the Census, 2004b; Vanderford et al., 2005). As modern manufactured homes become more common, residents appear to become more similar to residents of site-built homes; however, negative stereotypes of mobile and manufactured home residents are still pervasive (Apgar et al., 2002; Beamish et al., 2001; Foremost Insurance Group, 2002).

Data and Sample

The data for this study were obtained from the 5% Public Use Micro Data (PUMS) from the 1980, 1990, and 2000 United States Censuses. The PUMS is a nationally representative dataset based on the decennial Census; it contains comprehensive information about housing units and the persons living in each unit. Each housing unit from each Census year was counted as an observation.

Table 2. Characteristics of the Sample, by Census Year and House Structure Type**Panel A: 1980 Census**

Variable	Mobile	Manufactured	Site-Built	
			Multifamily	Single-Family
Percent of housing stock***	7.13	0.54	24.05	68.29
Year built**				
Before 1940	1.62	0.00	12.34	16.60
1940-1949	1.18	0.00	9.47	11.25
1950-1959	3.81	0.00	14.93	18.77
1960-1969	25.16	0.00	28.48	24.59
1970-1979	68.23	0.00	32.08	25.56
1980	0.00	100.00	2.70	3.24
Has phone (vs. not)***	71.98	75.85	83.28	91.90
On 10+ acres (vs. fewer)***	12.28	11.38	4.11	10.56
Number of bedrooms	2.31a b c (0.66)	2.42a d e (0.65)	1.94b d f (0.87)	2.86c e f (0.80)
Owner (vs. renter)***	76.10	90.62	14.12	82.30
Non-MSA (vs. MSA)***	35.86	32.73	10.01	23.00
Poverty status***				
Poor	19.55	13.17	25.86	13.88
Near poor	30.99	25.35	23.49	19.69
Not poor	49.46	61.48	50.65	66.42
Household type***				
Married couple	66.63	76.65	35.08	71.54
Single-female householder	20.21	15.37	43.76	20.96
Single-male householder	13.16	7.98	21.16	7.50
Number of persons	2.88b c (1.49)	3.03d (1.43)	2.36b d f (1.53)	3.01c f (1.57)
Race***				
African American	15.02	14.77	36.96	19.80
White	84.11	83.83	61.69	79.70
Other	0.87	1.40	1.35	0.51
Hispanic (vs. not)***	0.75	1.20	1.54	0.74
HS edu. or more (vs. less)***	49.31	60.68	65.79	57.20
Disabled (vs. not)***	16.94	10.58	16.94	19.51
Age	39.37a b c (16.26)	34.25a d e (13.68)	40.65b d f (18.07)	48.48c e f (16.20)
Sample size	6,670	501	22,508	63,920

**Table 2. (cont.)
Panel B: 1990 Census**

Variable	Mobile	Manufactured	Site-Built	
			Multifamily	Single-Family
Percent of housing stock***	6.01	6.05	20.30	67.64
Year built***				
Before 1940	3.61	0.00	6.14	9.34
1940-1949	2.59	0.00	5.51	7.47
1950-1959	5.31	0.00	8.78	14.48
1960-1969	22.33	0.00	16.40	18.97
1970-1979	66.15	0.00	24.79	23.24
1980-1989	0.00	89.17	35.40	23.56
1990	0.00	10.83	2.98	2.93
Has phone (vs. not)***	75.39	81.81	88.24	95.46
On 10+ acres (vs. fewer)***	10.34	9.87	0.47	8.95
Number of bedrooms	2.35a b c (2.93)	2.51a d e (2.73)	1.84b d f (3.81)	3.03c e f (3.38)
Owner (vs. renter)***	75.56	83.88	12.98	85.99
Non-MSA (vs. MSA)***	37.94	35.90	9.14	19.85
Poverty status***				
Poor	25.37	14.35	23.95	10.12
Near poor	29.82	26.49	20.04	15.59
Not poor	44.80	59.16	56.01	74.29
Household type***				
Married couple	52.27	65.47	28.05	67.95
Single-female householder	28.46	19.24	47.30	22.45
Single-male householder	19.28	15.29	24.65	9.61
Number of persons	2.66a b c (6.16)	2.88a d (5.84)	2.18b d f (6.29)	2.83c f (6.21)
Race***				
African American	19.42	15.90	38.78	19.97
White	79.43	83.11	58.37	78.96
Other	1.15	1.00	2.85	1.07
Hispanic (vs. not)***	4.40	3.43	5.88	3.79
HS edu. or more (vs. less)***	47.52	61.11	75.78	72.02
Disabled (vs. not)***	21.87	13.17	13.80	15.83
Age	44.87a b c (68.79)	38.39a d e (60.04)	39.80b d f (80.92)	49.47c e f (69.36)
Sample size	7,213	7,258	24,352	81,157

Table 2. (cont.)
Panel C: 2000 Census

Variable	Mobile	Manufactured	Site-Built	
			Multifamily	Single-Family
Percent of housing stock***	3.73	9.63	20.31	66.32
Year built***				
Before 1940	3.63	0.00	4.99	6.84
1940-1949	2.24	0.00	3.47	5.11
1950-1959	5.19	0.00	6.87	10.40
1960-1969	21.45	0.00	12.51	13.53
1970-1979	67.49	0.00	21.71	17.58
1980-1989	0.00	41.27	26.93	19.11
1990-1999	0.00	50.80	20.88	23.78
2000	0.00	7.92	2.67	3.65
Has phone (vs. not)***	84.56	91.98	96.13	98.22
On 10+ acres (vs. fewer)***	5.50	6.73	0.28	5.07
Number of bedrooms	2.32a b c (3.20)	2.65a d e (3.10)	1.77b d f (4.08)	3.12c e f (3.73)
Owner (vs. renter)***	59.91	79.44	12.73	86.12
Non-MSA (vs. MSA)***	55.98	59.53	13.50	26.29
Poverty status***				
Poor	25.89	17.04	21.52	8.19
Near poor	30.87	25.36	20.63	13.42
Not poor	43.24	57.61	57.85	78.39
Household type***				
Married couple	43.32	55.80	26.15	64.20
Single-female householder	30.49	25.51	46.32	23.79
Single-male householder	26.19	18.69	27.53	12.01
Number of persons	2.56a b c (6.05)	2.85a d e (6.15)	2.24b d f (6.96)	2.77c e f (6.44)
Race***				
African American	19.82	20.64	42.34	22.36
White	74.29	76.03	49.41	74.25
Other	5.89	3.33	8.25	3.39
Hispanic (vs. not)***	7.07	3.61	6.57	2.15
HS edu. or more (vs. less)***	50.69	64.94	80.41	81.81
Disabled (vs. not)***	38.81	29.87	25.69	24.28
Age	47.37a b c (69.62)	42.84a d e (61.89)	39.98b d f (79.33)	49.77c e f (69.69)
Sample size	5,607	14,463	30,496	99,582

Note. The values are means for continuous variables. Figures in parentheses below the means are standard deviations. For dichotomous and other categorical variables, the values are column percentages, except for the Percent of housing stock variable, which is reported in row percentages. Due to data limitations, the 1980 data were not weighted, while the 1990 and 2000 data were weighted. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; a-f Pair comparisons significant at $p < 0.001$.

The study sample included 363,727 owned or rented occupied housing units in Georgia. Of these, about 11% were mobile or manufactured homes, 21% were multifamily site-built homes, and about 67% were single-family site-built homes. These percentages do not add to 100% due to rounding.

As explained earlier, the term manufactured housing officially refers to homes built after June 1976 according to the HUD Code, whereas the term mobile home refers to factory-built homes built before the implementation of the HUD Code. The Census data refer to both types of homes as mobile homes and do not allow us to distinguish between them clearly. The Census variable indicating when each home was built is recorded in decades; therefore, mobile homes built between 1970 and 1979 could not be broken into separate groups of those built before and after June 1976. As a result, for the descriptive analysis, all such homes built during the 1970s were considered to be true mobile homes rather than manufactured homes. Homes classified in the Census data as mobile homes that were built after 1979 are truly manufactured homes and are referred to as such in the descriptive analysis.

Table 2 describes the sample by Census year and house structure type. Overall, mobile and manufactured homes represented an increasing percentage of owned and rented housing units in Georgia, from about 8% in 1980, to 12% in 1990, and to 13% in 2000. Included in Table 2 are several variables that do not describe resident characteristics but are important control variables in the multivariate analysis. For each house structure type, percentages are given for four characteristics: houses with a phone, houses located on 10 or more acres of land, houses that were owner-occupied, and houses that were located outside a Metropolitan Statistical Area (MSA). In addition, the mean number of bedrooms is given for each house structure type. The remaining variables in Table 2 describe characteristics of the residents. In all three years, the means of the continuous variables and the distributions of the categorical variables were statistically significantly different across the housing types. Please note, however, that chi-square tests for categorical variables can only test whether or not the overall distributions between a variable's categories are different among all four housing types. The information in Panel C of Table 2 allows us to determine which of the other housing types had residents that were most similar to residents of manufactured housing in the year 2000.

In some ways, manufactured housing residents appeared more like single-family site-built home residents than residents of either pre-HUD-Code mobile homes or multifamily site-built homes in 2000. For example, a majority of households living in manufactured and single-family site-built homes were married-couple households, the mean number of persons per household was higher than in the other two housing types, and their householders were less likely to be Hispanic than were householders of either mobile homes or multifamily site-built homes. This study did not combine race and Hispanic ethnicity; Hispanic persons may be of any race. Regarding race, householders residing in manufactured homes were similar to both those residing in single-family site-built homes and those residing in mobile homes, which had approximately the same percentage of White householders. In addition, the percentage of African American householders in each of those three housing types was roughly half of what it was in multifamily site-built homes.

Regarding race, it should be noted that its classification changed significantly between the 1990 and 2000 Censuses. Consequently, race is not a consistent concept across the Census years in this study. In earlier years, each respondent chose one racial identification. In 2000, selection of multiple racial identities became a possibility. In this study, for 1980 and 1990 data, individuals were coded as “White” or “Black” if they selected such categories, and they were coded as “other” if they selected any other category. For 2000, individuals were coded as “White” or “Black” if they reported “White alone” or “Black or African American alone,” respectively. Those who gave any other response, including multi-racial identifications, were recoded as persons of “other” race.

With respect to some other variables, in the year 2000, residents of manufactured homes differed from residents of single-family site-built homes and were more similar to residents of one or both of the other housing types. For example, the percentage of manufactured housing residents that were poor was roughly twice the percentage of single-family site-built home residents that were poor and was closer to the percentage of poor multifamily site-built home residents. The educational attainment of the householders was different. Householders of mobile and manufactured housing were less likely to have at least a high school diploma than were householders in site-built homes. The

mean age among manufactured housing householders was closest to the mean age among multifamily site-built home householders. Finally, the percentage of disabled householders in manufactured homes was greater than that in site-built homes but less than that in mobile homes.

How have residents of mobile and manufactured homes changed over time? Descriptive statistics that address this question are presented in Table 3, where mobile and manufactured homes have been combined into a single group. Some noticeable changes over the Census years were found in household type and householders’ race, ethnicity, educational attainment, disability status, and age. The proportions of both single-male-headed and single-female-headed households increased. Additionally, mobile and manufactured homes were increasingly occupied by households headed by racial and ethnic minorities.

Table 3. Characteristics of Mobile/Manufactured Home Residents, by Census Year

Variable	Census Year		
	1980	1990	2000
Poverty status			
Poor	19.10	19.72	19.49
Near poor	30.60	28.11	26.88
Not poor	50.30	52.17	53.63
Household type			
Married couple	67.33	59.04	52.34
Single-female householder	19.87	23.73	26.89
Single-male householder	12.80	17.23	20.77
Number of persons	2.89 (1.49)*	2.77 (6.02)	2.77 (6.27)
Race			
African American	14.82	16.71	20.34
White	83.61	78.83	73.60
Other	1.56	4.46	6.06
Hispanic (vs. not)	0.78	3.90	4.57
HS edu. or more (vs. less)	50.10	54.49	61.00
Disabled (vs. not)	16.50	17.41	32.34
Age	39.01 (16.15)	41.55 (65.96)	44.09 (64.69)
Sample size	7,171	14,471	20,070

Note. The values are means for continuous variables. *Figures in parentheses below the means are standard deviations. For dichotomous and other categorical variables, the values are column percentages.

Research Methods

To answer the question, “Are characteristics of mobile or manufactured home residents changing in Georgia?” this study utilized two logistic regression models. In each model, the response variable was the housing structure type, the main explanatory variables were household characteristics, and additional variables were controlled. The three housing structure types were 1) mobile home, 2) single-family site-built home, and 3) multifamily site-built home. Multifamily site-built homes included duplexes, multiplexes, town homes, apartments, and condominiums. Both pre-HUD-Code mobile homes and true manufactured housing were included in the mobile home category and referred to as such hereafter. As already explained, no distinction could be made about whether or not homes built in the 1970s were built before June 1976. In addition, we believed that splitting the two types of homes would not answer the question driving this research. Mobile and manufactured homes are seen by most people as being members of the same class of housing; manufactured homes are really just modern mobile homes. We were interested in determining how characteristics of residents of that general type of housing have changed over the years. The logistic regression analysis allowed an assessment of how the residents of mobile and manufactured homes were different from residents of both types of site-built housing, as well as how the differences changed since 1980—the baseline year.

The three categories of main explanatory variables were household income status, characteristics of householders, and household size. The three income status groups were poor, near poor, and non-poor, according to the federal poverty thresholds of the corresponding year. Six variables measured the characteristics of the householders. They were marital status and gender (i.e., household type) in three categories, race, Hispanic ethnicity, whether or not the individual at least completed high school, whether or not the individual had a disability, and age. Although a majority of Hispanic householders were White, some were of other races. Household size was the total number of people reported to live in the house.

Characteristics of the houses and some other variables were used as control variables. The housing variables controlled were whether or not a telephone was available, whether or not the home was situated on 10 acres

or more of land, the number of bedrooms, and housing tenure (owned or rented). The other variables controlled were metropolitan or non-metropolitan location, the year of the Census (1980, 1990, and 2000, where 1980 is the baseline), and a series of interaction terms between the Census year and the household characteristics. The interaction terms provided information as to whether mobile home residents’ characteristics were different from those of the other housing types and whether the differences changed over the two-decade time period.

Results

The results of two logistic regression models are shown in Table 4—one assessing the odds that a home was a mobile home as opposed to a single-family site-built home and the other assessing the odds that a home was a mobile home as opposed to a multifamily site-built home. The results described below focus only on the explanatory variables that were significant at a p-value of 0.0001 or less, due to the relatively large sample size for this study. Significant results are discussed in terms of odds ratios, which are shown in Table 5. Results related to control variables are shown in Table 4, but they are not discussed.

Some explanation of the odds ratios is needed, as the interaction terms complicate their interpretation. As usual, odds ratios for the main effects were calculated as the exponentials of the parameter estimates; they represent the odds ratios in 1980. For 1980, odds ratios were left blank in Table 5 when there was no significant difference in the odds for the two groups being compared. Odds ratios for 1990 and 2000 were calculated by exponentiating the sum of the parameter estimates for both the main effect and the interaction effect. For example, for the model comparing mobile home owners to single-family site-built home owners, the odds ratio for African American versus White in 1990 was calculated as $\exp(-0.8315 + 0.3065) = 0.59$. Odds ratios for 1990 and 2000 were left blank when they were not significantly different from those of the previous Census year.

The first model attempted to answer: Did households with different characteristics begin to reside in mobile homes, as opposed to single-family site-built homes, in Georgia between 1980 and 2000? Comparisons related to

Table 4. Parameter Estimates from Two Logistic Regression Models

Variable	Mobile/manufactured homes, compared to single-family site-built homes		Mobile/manufactured homes, compared to multifamily site-built homes	
	Parameter Estimate	Standard Error	Parameter Estimates	Standard Error
Main effects				
Intercept	-0.3446*	0.0502	-2.0602*	0.070v1
Year (baseline: 1980)				
1990	0.7099*	0.0550	0.6429*	0.0841
2000	0.7480*	0.0529	0.5607*	0.0809
Has phone (vs. not)	-0.8132*	0.0201	-1.1684*	0.0276
On 10+ acres (vs. fewer)	0.0817	0.0213	1.4078*	0.0510
Number of bedrooms	-0.7075*	0.0085	0.4179*	0.0127
Owner (vs. renter)	0.5829*	0.0162	3.0837*	0.0216
Non-MSA (vs. MSA)	0.7976*	0.0121	1.5205*	0.0206
Poverty status (baseline: Not poor)				
Poor	0.4092*	0.0421	0.5005*	0.0562
Near poor	0.5390*	0.0334	0.6301*	0.0475
Household type (baseline: Married couple)				
Single-female householder	0.1283	0.0393	-0.6516*	0.0503
Single-male householder	0.1753	0.0477	-0.4347*	0.0598
Number of persons	-0.0460*	0.0108	-0.1385*	0.0151
Race (baseline: White)				
African American	-0.8315*	0.0399	-1.5000*	0.0508
Other	0.4066	0.1641	-0.2750	0.1942
Hispanic (vs. not)	-0.7898	0.2256	-0.6903	0.2646
HS edu. or more (vs. less)	-0.5092*	0.0312	-0.8818*	0.0445
Disabled (vs. not)	0.1045	0.0404	0.0568	0.0583
Age	-0.5134*	0.0107	-0.4068*	0.0140
Interaction terms				
1990 x Poor	0.1271	0.0523	-0.1654	0.0719
1990 x Near poor	0.0604	0.0419	0.0741	0.0620
1990 x Single-female head	-0.0210	0.0482	-0.2716*	0.0646
1990 x Single-male head	0.0238	0.0579	-0.0143	0.0759
1990 x Number of persons	0.0124	0.0136	0.1815*	0.0198

Table 4. Parameter Estimates from Two Logistic Regression Models cont.

Variable	Mobile/manufactured homes, compared to single-family site-built homes		Mobile/manufactured homes, compared to multifamily site-built homes	
	Parameter Estimate	Standard Error	Parameter Estimates	Standard Error
1990 x African American	0.3065*	0.0485	0.5099*	0.0643
1990 x Other	-0.6069	0.2090	-0.6883	0.2533
1990 x Hispanic	0.8398	0.2647	1.1347	0.3173
1990 x HS edu. or more	-0.1628*	0.0387	-0.1608	0.0574
1990 x Disabled	0.0961	0.0499	0.1110	0.0752
1990 x Age	0.0272	0.0130	0.1940*	0.0174
2000 x Poor	0.2314*	0.0494	0.0379	0.0675
2000 x Near poor	0.0958	0.0398	0.0951	0.0590
2000 x Single-female head	0.0330	0.0455	-0.1077	0.0616
2000 x Single-male head	0.1678	0.0542	0.2456	0.0717
2000 x Number of persons	0.0883*	0.0128	0.2816*	0.0185
2000 x African American	0.5238*	0.0453	0.6174*	0.0601
2000 x Other	-0.9392*	0.1790	-1.1118*	0.2145
2000 x Hispanic	1.1162*	0.2419	1.0376	0.2855
2000 x HS edu. or more	-0.2461*	0.0371	-0.1265	0.0552
2000 x Disabled	0.1085	0.0450	0.1645	0.0664
2000 x Age	0.1451*	0.0123	0.2837*	0.0165
Model Log Likelihood Ratio	194,657.15*		79,509.22*	

Note. The Age variable in the logistic models is defined as (age - sample mean age)/10, where the sample-mean age was 48.89.

* p < 0.0001

the poverty status, the number of persons in the household, and race, ethnicity, educational level, and age of the householder all showed changes over the two decades. These changes are discussed in the following paragraphs.

Compared to non-poor households, households in poverty and those near poverty had higher odds of living in mobile homes as opposed to single-family site-built homes in all three Census years. Furthermore, poor households' relative odds of living in mobile homes increased significantly between 1980 and 2000. In 1980 and 1990, the odds that a poor household lived in a mobile home were 1.51 times the odds that a non-poor household lived in a mobile home; whereas, in 2000, the same ratio of odds was 1.90. Households near poverty had odds of living in mobile homes, as opposed to

Table 5. Odds Ratios from two Logistic Regression Models

Variable	Mobile/manufactured homes, compared to single-family site-built homes			Mobile/manufactured homes, compared to multifamily site-built homes		
	1980	1990	2000	1980	1990	2000
Poverty status (baseline: Not poor)						
Poor	1.51		1.90	1.65		
Near poor	1.71			1.88		
Household type (baseline: Married couple)						
Single-female householder				0.52	0.40	
Single-male householder				0.65		
Number of persons	0.96		1.04	0.87	1.04	1.15
Race (baseline: White)						
African American	0.44	0.59	0.74	0.22	0.37	0.41
Other			0.59			0.25
Hispanic (vs. not)			1.39			
HS edu. or more (vs. less)	0.60	0.51	0.47	0.41		
Disabled (vs. not)						
Age	0.60		0.69	0.67	0.81	0.88

single-family site-built homes, that were about 1.71 times the odds for non-poor households over all three Census years.

Distinct changes occurred in the relative odds of living in mobile homes in relation to race and ethnicity. Although White householders had greater odds than African American householders of living in mobile homes, as opposed to single-family site-built homes, African American householders' relative odds increased across the two decades. Specifically, in 1980, the odds that African American householders resided in mobile homes, as opposed to single-family site-built homes, were 44% of White householders' odds. This odds ratio increased to 0.59 in 1990 and to 0.74 in 2000. Additionally, in 1980 and 1990, Hispanics and non-Hispanics did not have different odds of living in mobile homes, as opposed to single-family site-built homes. In 2000, however, the odds that a Hispanic householder resided in a mobile home, as opposed to a single-family site-built home, were 1.39 times the odds for a non-Hispanic householder.

Larger households and older householders also had increasing relative odds of living in mobile homes, as opposed to single-family site-built homes, between 1980 and 2000. In both 1980 and 1990, larger households had slightly lower odds of living in mobile homes. In 2000, however, larger households had slightly higher odds of living in mobile homes. Given two householders that were 10 years apart in age, the older householder had odds 60% as great as the odds of the younger householder of living in a mobile home in 1980 and in 1990. In 2000, this odds ratio was 0.69. Our literature review suggested testing for possible curvilinearity of the age effect. However, results of the model with age and age squared produced unrealistic results; therefore, only the linear effect of age was assessed in the model that is presented.

Finally, compared to householders with less education, those with a high school diploma or more education had lower odds of living in a mobile home, as opposed to a single-family site-built home, and their relative odds actually diminished over the two decades. In 1980, the odds that a householder with a high school diploma or more education resided in a mobile home were 60% of the odds of householders with less education. This odds ratio decreased to 0.51 in 1990 and to 0.47 in 2000.

The second model addressed the question: In Georgia, how did the characteristics of mobile home residents change, relative to the characteristics of the residents of multifamily site-built homes? Regarding poverty status and education, differences in the odds of living in mobile homes existed in 1980, but those differences did not change by 2000. Poor households and near poor households had higher odds of living in mobile homes than did non-poor households; householders with more education had lower odds of living in mobile homes than did householders with less education. Comparisons related to the household type, the number of persons in the household, and the race and age of the householder all changed over the two decades. These changes are interpreted in the following paragraphs.

Compared to households headed by married couples, households headed by single individuals had lower odds of living in mobile homes, as opposed to multifamily site-built homes, in all three Census years. In 1980, the odds that a single-female-headed household lived in a mobile home, as opposed to a multifamily site-built home, were 52% of the odds of households

headed by married couples. By 1990, this figure had decreased to 0.40. Compared to married-couple households, single-male-headed households also had lower odds of living in mobile homes, as opposed to multifamily site-built homes. In all three Census years, their relative odds of living in mobile homes were about 65% of the odds of married-couple households.

Larger households, African American householders, and older householders all exhibited increasing relative odds of living in mobile homes, as opposed to multifamily site-built homes. In 1980, larger households had lower odds of living in mobile homes than did smaller households, but in 1990 and 2000, the situation reversed and larger households had higher odds. African American householders' relative odds of living in mobile homes, as opposed to multifamily site-built homes, were lower than White householders' odds, but the gap closed somewhat over time. In 1980, the odds that African American householders were living in mobile homes were 22% of the odds that White householders were. This odds ratio increased to 0.37 in 1990 and to 0.41 in 2000. Finally, older householders had lower odds of living in mobile homes than did younger householders, but the age impact became smaller over time. In 1980, the odds that a given household was living in a mobile home were 67% of the odds of a household with a householder who was 10 years younger. This figure increased to 0.81 in 1990 and to 0.88 in 2000.

In summary, characteristics of residents of mobile homes in Georgia changed between 1980 and 2000. Compared to comparable single-family site-built homes, mobile homes became more common among Georgian households that were poor and larger in size, and among householders who were African American, Hispanic, older, or had less than a high school education. Compared to comparable multifamily site-built homes, mobile homes became more common among larger Georgian households, African American householders, and older householders. Living in mobile homes became less common among single-female-headed households.

Discussion

Results from this study of mobile and manufactured home residents in Georgia substantiate claims that characteristics of residents of the housing type are changing. In particular, mobile and manufactured homes have grown

in popularity among both African Americans and Hispanics. In addition, mobile and manufactured homes have become more common among larger households. Both of these trends may be the result of greater flexibility in home size, design, and amenities, as well as changes in the economy.

Other changes in characteristics of residents of mobile and manufactured homes over the past 20 years reinforce stereotypes. The housing type became more common among poor households and less common among householders with at least a high school education. These changes should be considered from two perspectives to get a full understanding of what may lie behind them. First, the model of housing adjustment proposed by Morris & Winter (1978) would suggest that these households may be choosing mobile or manufactured homes over other types of housing because of the constraints that they face in terms of income and earnings potential. A second important consideration in understanding these changes in residents is the state of financing in the manufactured home industry.

Although the manufactured housing industry has made great gains in the areas of quality, safety, size, and amenities, financing has not advanced as well. Most manufactured homes are still titled, purchased, and financed as personal property (Buchholz, 2005), which is not as beneficial to the consumer as mortgage financing. Among new manufactured homes purchased in Georgia in 2003, only 33% were titled as real property (U.S. Bureau of the Census, 2004d). In the past, consumers have not been given many financing choices and have been often encouraged to use the dealer's sub-prime loan options. However, with the changes taking place in the financing arena, more consumers are encouraged to apply for traditional home mortgages. In general, households with few other options (i.e., those with limited incomes) will be most willing to use such financing terms, and householders with lower educational levels will be less able to understand the potentially dire consequences of such financing. Broad changes in the population of households living in manufactured housing will only occur with reform of manufactured home financing.

Two limitations of the study need to be mentioned. The major limitation of this study is our inability to distinguish between mobile homes and manufactured homes among those built in 1970s. Another limitation is

the inability to differentiate the homes permanently affixed to a foundation and those that were not, when such variation makes differences in financing option and tax obligation.

Lastly, although value and quality of modern manufactured homes have improved dramatically over products from earlier decades, many consumers still have dated perceptions of this form of shelter. It is possible that, given complete and accurate information about manufactured housing, more households—as well as a more varied range of households—would choose to live in such homes. It is also possible that community planners would be more open to allowing manufactured homes in their communities if they knew more about the quality of the homes being manufactured today. Such expanded availability might also increase the number and variety of households living in manufactured homes in the U.S.

In order to inform consumers about the quality of the current manufactured housing products on the market, we suggest the creation of some demonstration projects. Projects would allow consumers and local and state policy makers to actually experience the state of the art manufactured housing of today. This form of shelter will be able to benefit a growing need for workforce housing in today's American society.

References

- Apgar, W., Calder, A., Collins, M., & Duda, M. (2002, September). *An examination of manufactured housing as a community- and asset-building strategy. Report to the Ford Foundation*. Washington, DC: Neighborhood Reinvestment Corporation.
- Beamish, J.O., Goss, R.C., Atilas, J.H., & Kim, Y. (2001). Not a trailer anymore: Perceptions of manufactured housing. *Housing Policy Debate*, 12, 373-392.
- Buchholz, D. (2005). "Mobile" homes no more: Policy innovations in manufactured housing. *Housing Facts & Findings*, 7(4), pp. 3, 4, 6-7.
- Foremost Insurance Group. (2002). *Manufactured homes: The market facts. 2002 report*. Caledonia, MI: Author.
- Georgia Department of Community Affairs. (2002, April). *Section 4.4: Manufactured home compatibility standards. Model Code: Alternatives to Conventional Zoning*. Retrieved on March 27, 2006 from http://www.dca.state.ga.us/intra_nonpub/Toolkit/ModelOrdinances/AltZ/4_4.pdf

- Housing Assistance Council. (2000). *Why housing matters: HAC's 2000 report on the state of the nation's rural housing*. Washington, DC: Housing Assistance Council.
- Jovan, W.E., & Joseph, W.B. (1997). Industry corner: The outlook for manufactured housing in the United States. *Business Economics*, 32, 27-31.
- Morris, E.W., & Winter, M. (1978). *Housing, family, and society*. New York: Wiley.
- Nitschke, L. (2004, March). *Manufactured homes a big factor in rural homeownership in U.S.* Retrieved on March 23, 2006 from <http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=10117>
- Suchman, D.R. (1995, March). *Manufactured housing: An affordable alternative* (Working Paper). Washington, DC: The Urban Land Institute.
- U.S. Bureau of the Census. (2000a). Table DP-4: Profile of selected housing characteristics: 2000. Census 2000: Summary File 3 (SF 3)—Sample Data. Retrieved on September 3, 2004 from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en
- U.S. Bureau of the Census. (2000b). Table HCT18: Total population in occupied housing units by tenure by units in structure. Census 2000: Summary File 4 (SF 4)—Sample Data. Retrieved on March 25, 2005 from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en
- U.S. Bureau of the Census. (2000c). Table QT-H13: Gross rent as a percentage of household income in 1999: 2000. Census 2000: Summary File 3 (SF 3)—Sample Data. Retrieved on September 3, 2004 from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en
- U.S. Bureau of the Census. (2000d). Table QT-H15: Mortgage status and selected monthly owner costs: 2000. Census 2000: Summary File 3 (SF 3)—Sample Data. Retrieved on September 3, 2004 from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en
- U.S. Bureau of the Census. (2000e). Table QT-H16: Selected monthly owner costs as a percentage of household income in 1999: 2000. Census 2000: Summary File 3 (SF 3) Sample Data. Retrieved on September 15, 2004 from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en

- U.S. Bureau of the Census. (2004a). Average sales price of new manufactured homes placed, by size of home by state—2003. *Manufactured Housing Construction Statistics*. Retrieved on October 6, 2004 from <http://www.census.gov/const/mhs/char03.pdf>
- U.S. Bureau of the Census. (2004b). Median and average sales prices of new one-family houses sold. *New Residential Sales—Characteristics of New Housing*. Retrieved on March 24, 2005 from <http://www.census.gov/const/C25Ann/soldmedavgprice.pdf>
- U.S. Bureau of the Census. (2004c). Placements of new manufactured homes by region and size of home, 1980-2003. *Manufactured Housing Construction Statistics*. Retrieved on October 6, 2004 from http://www.census.gov/const/mhs/Placnsa_all.pdf
- U.S. Bureau of the Census. (2004d). Selected characteristics of new manufactured homes placed by region—2003. *Manufactured Housing Construction Statistics*. Retrieved on October 6, 2004 from <http://www.census.gov/const/mhs/char03.pdf>
- U.S. Department of Housing and Urban Development. (2001, September). *A community guide to factory-built housing*. Norwalk, CT: Steven Winter Associates, Inc.
- U.S. Department of Housing and Urban Development. (2005, February). "Why not in our community?" *Removing barriers to affordable housing*. Retrieved on November 30, 2005 from <http://www.huduser.org/Publications/pdf/wnioc.pdf>
- Vanderford, S.E., Mimura, Y., & Sweaney, A.L. (2005). A hedonic price comparison of manufactured and site-built homes in the non-MSA U.S. *Journal of Real Estate Research*, 27(1), 83-104.

HOUSING HEROINES: A TRADITION OF SOCIAL ACTION RESEARCH

Ann Ziebarth

Abstract

The work of early twentieth-century housing reformers illustrates the strong tradition of social action research within housing studies. These housing heroines successfully influenced public policy with their scholarship. As an antecedent to today's feminist scholarship, their work centered on issues that are critical to people's lives and implicitly recognized gender as a key factor. Furthermore, the feminist perspective is also apparent as these women acknowledged the experiential knowledge base of the people they sought to help incorporating their perspectives into the research. Feminists approach their work with explicit outcomes in mind: empowering participants and making effective changes and improvements in their lives. Thus, feminist scholarship is political as well as academic. Few research subjects are better suited to a feminist scholarship than housing studies. Where one lives has a direct impact for economic opportunities and for the well-being of household members. Therefore, the public policies that shape housing are directly linked to people's lives and livelihoods. Yet, the majority of housing research tends to remain at arms length, emphasizing the "objective science" model of research rather than action research designed to advocate for social change. It is time to examine the history of women's role in formulating housing policy and consider following the example of early twentieth-century activists in our own housing scholarship.

Introduction

Feminist scholarship centers on issues that are crucial to the well-being of people with an explicit goal of empowering participants and improving their lives. In addition, the feminist approach to social science research recognizes that the participants themselves bring expertise to the

Ann Ziebarth is Associate Professor-Housing Studies, Department of Design, Housing, and Apparel, University of Minnesota, St. Paul, MN. An earlier version of this paper was presented at the Housing Education and Research Association Annual Conference, Chicago, IL, October 2004. The author wishes to acknowledge the contributions of Dr. Jennifer Gunn for her review and thoughtful comments on the manuscript.

project through their “lived experiences.” Few research subjects suit a feminist approach better than housing studies. Where one lives has a direct impact on his or her opportunities, health, and well-being. Thus, the public policies that shape housing at the local, state, and federal levels are directly linked to the lives of individuals and their families. Certainly, the disparities that persist regarding housing access and affordability for women and other minority groups cannot be denied. Yet, the majority of housing studies research tends to remain at arms length, emphasizing the “objective science” model of research rather than action research designed to advocate for social change. It is time to look back at the history of women’s role in formulating housing policy and incorporate the example of these housing heroines as models for future scholarship and advocacy efforts.

Housing is a feminist research topic. Gender is a significant factor in housing outcomes today. Among women-headed families with children in the U.S., 28% are faced with a critical housing problem such as paying more than half of their incomes for housing or living in severely substandard conditions (McAuley Institute, 2003). Women are further disadvantaged due to urban planning and housing development designs (Little, 1994). The development of suburbs that created large residential districts lacking access to services and jobs put women at a particular disadvantage especially when they are responsible for the triple role of homemaking, dependent child or elder care, and labor force participation. They are often disadvantaged in attempts to achieve homeownership due to lower incomes and discrimination in the mortgage lending process. Women are especially at risk of subprime, fraudulent, and predatory loans as well as equity stripping in mortgage lending. Perhaps because of their disadvantaged economic and power position, women have also been at the forefront of housing reform and housing policy formation.

The study findings reported here focus on housing researchers whose work influenced public policy and social action during the early twentieth century. Jane Addams (1860-1935), Ellen Richards (1842-1911), Edith Elmer Wood (1870-1945), and Catherine Bauer Wurster (1905-1964) served as exemplars of the American housing movement between 1914 and 1937. These women were among the activist “housers” that included social workers, economists, labor leaders, lawyers, and municipal officers (Birch 1983, p. 150).

The coalition involved in the American housing movement was unique due to the predominance of leadership by women. For this study, I selected writings from each of the four “housing heroines” to conduct a content analysis, and by examining the content and methodology of the four housing activists’ work, I identified dominant themes and policy impacts.

The example provided by the four housing heroines illustrates the power and tradition of social action research within housing studies. These early feminists inspire contemporary researchers to use their own theoretical frameworks and research skills to move beyond the comfort zone of abstract academic scholarship and consider the potential of social action research. For housing activists, the findings highlight the critical impact research has in shaping public policy.

Theory and Practice

Feminist research focuses on approaching research questions that are critical in people’s lives and recognizes the role that gender has in framing issues. From a feminist perspective, both the researcher and the participants are actively involved in the research process. Rather than attempting to provide an objective and distant research situation, feminist scholars accept that they are drawn to particular topics and that they cannot conduct their work separate and apart from the community they are studying. Rather, they accept their own emotional involvement and they honor the participants’ experiential knowledge incorporating that understanding into the research project itself. In addition, feminists approach their work with a practical applied outcome as part of the process. The goal is to empower the participants and to make effective changes and improvements in their lives. Thus, feminist scholarship is directly invested in a political stance (Miranne & Young, 2000).

Participatory Action Research (PAR) is a methodology commonly employed by feminist scholars to achieve their objectives. McTaggart (1991) illustrated the basic theory of participatory action research in the form of a set of principles defining what participatory action research is, and what it is not. McTaggart based his principles on the work of social psychologist Kurt Lewin, who first coined the term “action research,” and described it as a spiral of steps composed of planning, acting, observing, and evaluating that lead to some

kind of action or change. The process of action research is an iterative one in which theory and action are combined. The research seeks to “try out a theory with practitioners in real situations, gain feedback from the experience, modify the theory as a result of this feedback, and try it again” (Avison, Lau, Myers, & Nielsen, 1999). Participatory Action Research, however, comes from a critical social science perspective. As articulated by McTaggart (1991), “social inquiry cannot simply explain or merely understand the sources of problems people face... (it must) engage the full spectrum of social practioners in inquiry to inform and guide practice, to suggest action to take to overcome problems and difficulties, and to suggest new possibilities” (p. 180). Therefore, the critical point in participatory action research is that people are not the objects of the research; they are instead co-participants in the research process, project development, and dissemination of the findings.

Two basic goals of participatory research frame the essence of feminist scholarship (Stoecker & Bonacich, 1992). First, knowledge creation is democratized. It involves engaging the community being studied in the process such that they participate in determining the research question, they oversee the research process, and they have access to the results. Social change is the second major goal of participatory research. Thus, feminist research moves beyond basic science’s purpose of expanding knowledge and extends applied research to involve education and empowerment. In effect, activism directed at making a real difference is a key component to most feminist scholarship.

Admittedly, not all scholars embrace the role of participatory social action as essential for high quality feminist research. For example, Janet Saltzman Chafetz (2004) made an eloquent argument that “[p]eople committed to a sociopolitical ideology have different skills they can offer to a social movement designed to bring about social change” (p. 975). Thus, while we as housing scholars may not be directly involved in political action such as organizing efforts for housing as a human right or testifying at legislative hearings, we do have the responsibility to conduct quality research on topics of critical importance. In this way we support the “convention that feminist social and behavioral scientists can maximize their movement contributions by doing excellent social science on gender issues: that is their unique contribution” (Chafetz, 2004, p. 975). Housing research that centers on the

essence of Hestian/Hermean Dual System Paradigms, that tension between the domestic and the public spheres, contributes to the body of knowledge within feminist social science (Thompson, 2002).

Data and Methods

Using interpretive research methods, selected work from the four exemplars is identified and analyzed. The publications studied include the following:

- *The Housing Problem in Chicago* by Jane Addams, published in 1902
- *Twenty Years at Hull-House* by Jane Addams, published in 1910
- *The Cost of Shelter* by Ellen H. Richards, published in 1905
- *Housing of the Unskilled Wage Earner: America's Next Problem* by Edith Elmer Wood, published in 1919
- *Modern Housing* by Catherine Bauer Wuster, published in 1934

These works span the historical period from the Progressive Era of the 1900s through the post-World War I inflationary period and into the Great Depression of the 1930s. Within this context, the most pressing housing problems centered on public health concerns emerging from rapid urban growth, substandard and overcrowded housing conditions, and the rising cost of housing relative to household incomes.

The process of conducting the textual content analysis followed a standardized research protocol (LeCompte & Preissle, 1993). An initial reading of each text provided an overview of the author’s perspective. Subsequent readings identified major points and highlights of the text. Selected quotations were pulled out to summarize the textual highlights. A review of these quotations from all the sources was then used to identify major cross-cutting themes. The themes were used to establish a matrix of the quotations forming the basis of the content analysis. This matrix was then used to identify the findings for each of the authors. The themes then become the basis for a further discussion regarding the application of the work of early housing researchers and policy advocates to the housing legislation of their time as well as the housing issues apparent today. The findings from the content analysis are presented in the following section. These findings reflect the analysis of the primary data sources supplemented with appropriate secondary sources of information.

Results

Jane Addams is best known for establishing Hull House, a social experiment based on the settlement house model of Toynbee Hall in East London. Her vision was to provide educated young women the opportunity to learn from real life and address the many real needs of poor families living in the urban areas. In Jane's words, "It is hard to tell just when the very simple plan which afterward developed into the Settlement began to form itself in my mind...I gradually became convinced that it would be a good thing to rent a house in a part of the city where many primitive and actual needs are found, in which young women who had been given over too exclusively to study, might restore a balance of activity along traditional lines and learn of life from life itself" (Addams, 1910, p. 85). In September 1889 her vision was realized when she moved into the house near the junction of Blue Island Avenue, Halsted Street, and Harrison Street in Chicago. Joining Addams at Hull House were Ellen Gates Starr, an "old-time school friend" who had traveled with Jane on her European tours and Mary Keyser, who "began by performing the housework" (pp. 94-95). The house was furnished as if it were "in another part of the city, with the photographs and other impedimenta we had collected in Europe, and with a few bits of family mahogany. While all the new furniture which was bought was enduring in quality, we were careful to keep it in character with the fine old residence" (p. 94).

Hull House became a center for a wide range of services to neighborhood residents ranging from a kindergarten to a speaker's series. These programs and services were developed with the express purpose of assimilating new immigrants into the American Culture. Approximately nine-tenths of the new foreign immigrants in Chicago were from the countryside and carried on traditional rural activities, such as butchering sheep and sorting rags collected from the city dumps, in the crowded urban tenements (Addams, 1910, p. 294). These were the people with the "primitive and actual needs" Hull House residents were to serve by providing English language lessons, child care, meals, cultural activities, and other community educational opportunities. The real strength of Hull House, however, extended well beyond the provision of support services to neighborhood residents linking direct service with public policy advocacy.

Jane Addams' social action work included a number of investigations into neighborhood conditions. In her book *Twenty Years at Hull-House*, she reported on the living conditions of neighborhood residents:

The houses of the ward, for the most part wooden, were originally built for one family and are now occupied by several. They are after the type of inconvenient frame cottages found in the poorer suburbs twenty years ago. Many were built where they now stand; others were brought thither on rollers, because their previous sites had been taken for factories. The fewer brick tenement buildings which are three or four stories high are comparatively new, and there are few large tenements. The little wooden houses have a temporary aspect, and for this reason, perhaps, the tenement-house legislation in Chicago is totally inadequate. Rear tenements flourish; many houses have no water supply save the faucet in the back yard, there are no fire escapes, the garbage and ashes are placed in wooden boxes which are fastened to the street pavements. One of the most discouraging features about the present system of tenement houses is that many are owned by sordid and ignorant immigrants... [Residents also include] men and women of education and refinement [who] come to live in a cheaper neighborhood because they lack the ability to make money, because of ill health, because of an unfortunate marriage, or for other reasons which do not imply criminality or stupidity (Addams 1910, p. 100).

In 1902 Jane Addams published a report on Chicago's tenement district in the *Annals of the American Academy of Political and Social Sciences*. In it she reports the findings of an investigation conducted two years earlier by the City Homes Association, a private nonprofit community group. The City Homes Association found poor streets, houses unconnected to street sewer, rear tenements, housing units with no water supply except for maybe a faucet in the back yard, and multiple story buildings without fire escapes. In her report Addams noted "the average tenancy in the houses throughout the three districts was only three families to a house...many of these single houses were very small, sometimes containing but two or three rooms" (Addams, 1902, p. 100). The advantage of the shared overcrowded conditions was that rent costs were low. In many cases the owners were holding property in anticipation of future development and therefore invested very little in the property and

charged rents at levels to basically cover the required property taxes and make a profit. Cost analyses of developing higher quality housing resulted in a realization that the rent charges would need to be significantly higher and that the incomes of the residents would be insufficient to meet the higher cost. Addams made another key point in her article regarding the insecure economic conditions and the goal of homeownership.

Some of us still believe that a workingman has a sense of ownership only when he puts his savings into a piece of ground or the house in which he lives. To tie a workingman down to a given piece of ground is often of questionable good. A man may put all his savings into a house on the North Side of Chicago, for instance, and before it is paid for, find himself out of work; his next work may be fifteen miles from that place, in South Chicago (Addams, 1902, p. 102).

She went on to suggest that the industrial conditions confronting workingmen was an essential part of any housing policy recommendation.

Through the development of Hull House, Jane Addams' work illustrates the way in which social action research linked service with public policy advocacy. A key element of the investigations of Hull House was the ability to merge research and advocacy efforts with those of larger organizations, such as the City Homes Association and the American Academy of Science (Addams, 1910, p. 304). Investigative reports conducted in collaboration with other organizations and presented to the Illinois legislature resulted in laws that directly improved the lives of poor people. For example, Hull House served as a major collaborator on a study of infant mortality conducted by the American Academy of Science in 1909. Hull House resident Dr. Alice Hamilton led the study examining the juxtaposition of typhoid cases to various systems of plumbing and non-plumbing. The scientific findings on disease and housing conditions was used in a trial before the civil service board that resulted in the discharge of 11 out of 24 Sanitary Bureau employees (Addams, 1910, p. 297). Other social action revolved around promoting the "eight hours' work for eight hours pay," child labor laws, and mandatory schooling for children. Investigative reports were presented to the Illinois Legislature that eventually resulted in provisions that became "the first factory law of Illinois, regulating the sanitary conditions of the sweatshop and fixing fourteen as the age at which a child might be employed" (Addams, 1910, p. 201).

The applied approach toward housing advocacy and policy exemplified by Jane Addams takes on a more academic perspective in the work of Ellen Henrietta Swallow Richards. Known as a chemist and a pioneer in the field of sanitary engineering, Richards' interest in housing came from "personal experience with unhealthy servants and the death of one of her four sons from contagion" (Birch, 1983, p. 283). It is, however, her 1905 study *The Cost of Shelter* that is of interest here. In this work, Richards applied her skill as a scientist and theorist to housing reform (Birch, 1983, p. 153). Laying out a detailed analysis of housing costs, the book provided a commentary on the importance of housing for family life and as a measure of social standing. Furthermore, Richards highlighted the importance of housing affordability, linking the cost of housing with household income. She also pinpointed a main cause for the increasing cost of housing.

The increased sanitary requirements have doubled the cost of a given enclosed space, the finish and fittings now found in the best houses have doubled this again, so that it is quite within bounds to say that a house which might have been put up to meet the needs of the day in 1850 for, say, \$5,000 will now cost \$20,000 (Richards 1905, p. 84).

Richards went on to present detailed household budgets identifying rent, meals, clothing, incidentals, savings, and the means by which a household could afford suitable housing. She specified affordable rent levels based on the "thrifty French rule" setting the appropriate maximum amount spent for housing at one-fifth the monthly household income and pointed out that the cost of housing "depends on the demand, on competition rather than quality" (Richards, 1905, p. 97). Richards also recognized the link between social status and housing: "[t]here has been noted in every age a tendency to measure social preeminence by the size and magnificence of the family abode" (Richards, 1905, p. 15).

While Jane Addams used the studies of reformers, advocates, and civic organizations to promote improved living conditions, Ellen Richards' work established the tradition of using scientific, academic research to provide the basis for recommending housing standards. It is notable that Richards' work did little to discuss issues identified by later authors such as overcrowding, neighborhood conditions, or tenant behavior. For Richards, housing was limited primarily to the single-family dwelling and its residents with the

discussion directed toward those starting a new family household: the young married couple anticipating children. Consideration of the single individual, an older couple, or other family type was omitted in her work.

Finally, Richards' efforts at social action were focused primarily in promoting access for women in the sciences and by extension, their influence in setting standards for improved living conditions. Massachusetts Institute of Technology established a Women's Laboratory in 1876 and three years later Richards was recognized as an unpaid assistant instructor teaching chemistry, mineralogy, and applied biology. She led the home economics movement and was an active participant at the Lake Placid Conference (1899-1907) in establishing the discipline of home economics as a professional field of "domestic science" for educated women (Stage & Vincenti, 1997). Later she and Professor William Ripley Nichols conducted a major water quality survey that resulted in the first water-quality standards in the nation and the development of the first modern municipal sewage treatment plant ("Ellen Swallow Richards," n.d.; Winslow, 1916).

As the earliest and most influential advocate for public housing in America (van Hoffman, 2005, p. 225), Edith Elmer Wood provides the best example of social action research among early housing scholars. Her work challenged the philosophy of Lawrence Veiller, author of the 1901 New York Tenement House law. It was Veiller's view that "poor housing, caused by the unscrupulous landlord and careless tenant, was a threat to the general health, safety, and public welfare and therefore must be controlled" (Birch, 1983, p. 154). He adamantly argued that the role of the government should be limited to slum clearance, while housing construction should remain firmly in the control of the private sector. Edith Elmer Wood, in contrast, believed in the concept of publicly financed housing for the masses (not just the poor).

Wood went beyond Veiller's recommendations and insisted that adequate housing necessarily involved more than basic health and safety. She recognized that for homes to be positively supportive of family life, the quality of the dwelling was only one component. She insisted that the neighborhood condition and access to employment were also essential to "decent" housing. In 1913 Wood surveyed hundreds of alley dwellers in Washington, DC and found that people lived in extremely substandard and overcrowded conditions

simply because they had no other choice (Birch, 1983, p. 155). This work led her to identify the role of overcrowding, as well as structural condition of the dwelling, had for health and safety. "Tuberculosis flourishes in dark rooms and basement dwellings. The danger of contagion is multiplied by overcrowding. Overcrowding and lack of privacy result in immorality" (Wood, 1919, p. 27). Based on her research and analyses, Wood established a standard of density limited to one person per room.

Her concern was that a public policy based on Veiller's recommendation of slum clearance without provision for affordable housing would exacerbate rather than alleviate the problem of overcrowding. In 1914 she wrote a bill that was introduced in the U.S. Congress, but not passed, that addressed housing needs by authorizing government issued loans to limited dividend housing companies (von Hoffman, 2005, p. 225). Wood's concern with affordable housing also led her to concur with Ellen Richards that a guideline of affordability should be set at 20% of a family's income.

World War I had basically halted all domestic housing construction and the war industry required a relocation of workers to meet military needs. Congress approved the first federal housing project in 1918, appropriating funds to the Shipping Board for housing construction to meet the needs of workers employed in the war effort. Yet, according to Wood, "the war housing problem was only a part of the larger housing problem" (Wood, 1919, p. 6). Wood had expanded her research effort beyond Washington, DC and compiled the findings of housing condition surveys from across the country, publishing *The Housing of the Unskilled Wage Earner* in 1919.

After compiling housing condition information from cities and states across the country for five years, Wood estimated that "one-third of the people of the United States are living under subnormal housing conditions which fall below the minimum standard...and about a tenth are living under conditions which are an acute menace to health, morals and family life" (Wood, 1919, p. 7). The bottom line for Wood was

If our modern civilization requires workers to congregate in cities and the great value of land there puts the control of their housing out of the hands of these workers and good housing out of their reach, then it would seem logical that housing should be accepted as a community problem (p. 239).

Wood proposed a dual effort incorporating restrictive and constructive housing legislation in order to address housing needs (Wood, 1919, p. 257, 260). At the end of her book she outlined a comprehensive housing policy for the U.S. In it she proposed the use of four types of government aid to facilitate the construction of housing: direct state or municipal housing; loans to non-commercial housing companies; loans to workingmen; and tax exemptions for rental houses meeting approved standards. Simultaneously, she proposed restrictive housing legislation that set minimum standards to prevent the creation of new slums and the gradual elimination of existing ones. In order to facilitate these recommendations, Wood suggested the establishment of a national housing commission that would loan money from a national housing fund to municipal or other local authorities planning direct housing development and to limited-dividend housing companies. Loans to individuals would be made possible through postal savings deposit loans allowing people to build their own homes. The third financial recommendation was to amend the Federal Reserve Act permitting national banks to make housing loans and similarly amend the Farm Loan Act to extend lending to housing loans (Wood, 1919, pp. 267-268).

Wood's comprehensive housing policy outlined a role for state and local government as well as the federal government. State legislation should include a "restrictive housing law, a constructive housing law, and a town planning law" (Wood, 1919, p. 269). At the local level she recommended that Housing and Town Planning Boards be established with responsibility for investigating local conditions and educating the community to the "dangers of bad housing and the possibilities of good housing" (Wood, 1919, p. 273).

Thirteen years later, in 1932, President Hoover called the President's Conference on Home Building and Home Ownership to address housing needs that were occurring as a result of the economic downturn that became the Great Depression. Edith Elmer Wood was an active participant serving on both the Committee on Standards and Objectives and the Committee on Research. The Conference identified a number of policy recommendations including:

- Set minimum requirements for plumbing and electrical installation
- Create local planning commissions authorized to prepare a master plan and provide for

- administrative control over subdivision development
- Enact state and municipal legislation for planning, zoning, land subdivision, building, housing, and sanitary codes, as well as equitable assessments for taxation purposes
- Establish uniformity of arrangement in building codes and their periodic revision
- Provide tax relief for overburdened properties by utilizing other sources of revenue
- Protect home purchasers and renters through building codes, zoning ordinances, subdivision regulations, fire prevention, licensing real estate brokers, and improved assessment techniques
- Enact laws on arson control and individual liability for fire
- Establish a state regulatory body to determine and apply standards of housing and sanitation for labor camps and for housing of migrants
- Remove legislation restrictive of Negro residence in desirable districts and protection against discrimination
- Create nonprofit and limited dividend companies to provide low-cost housing

While over the next 75 years these recommendations were eventually included in housing legislation, a number of committees at the President's 1932 Conference made no recommendations at all. For example, the Committee on Blighted Areas and Slums "lists many projects that require legislation, but because of their controversial character, withholds recommendations" (Gries & Ford, 1932, p. 107). The only policy resolution of the entire Housing Conference was the endorsement to create a system of home loan discount banks. This recommendation became law with the enactment of the 1932 Federal Home Loan Bank Act.

It would be another five years before the U.S. Housing Act of 1937 would establish the United States Housing Authority to address housing needs at a national level. The United States Housing Act of 1937, known as the Wagner-Steagall Act, established the basis of all future housing policies. This legislation articulated a federal responsibility in providing "decent, safe and sanitary dwellings within the financial reach of families of low income." Following Richards' and Wood's recommendations, affordable housing guidelines were set at the amount a household spent when allocating no more than 20% of their income for rent including heat, light, water, and cooking fuel. Due to the increased cost of non-housing needs for larger families, the law set a housing affordability ratio of one to six for households that included three

or more minor dependents. The legislation authorized the federal government to issue loans for slum clearance and the development of low-rent housing. Addressing advocates' concerns that housing demolished through slum clearance might not be replaced with affordable housing, the legislation further required a one-to-one replacement; for every unit developed, a substandard unit would be eliminated through demolition, condemnation, effective closing, or compulsory repair or improvement (U.S. Housing Act, 1937).

Revisions to the regulations on demolitions and disposition of public housing in 2006 no longer require a replacement plan as part of the application for demolition funding (U.S. Department of Housing and Urban Development, 2007). As housing policy put a priority on "deconcentration of poverty," funding typically included the demolition of public housing units and its subsequent replacement with mixed income housing developments.

The fourth housing heroine whose example provides inspiration for social policy research is Catherine Krouse Bauer. Bauer's research contribution focused on an extensive review of European and American housing policies outlined in her 1934 book *Modern Housing*. Three factors regarding housing conditions were highlighted. First was overcrowding; in Bauer's words "space is probably the most important single factor, short of a certain minimum of firmness, in the quality of the dwelling" (Bauer, 1934, p. 17). The second point was the impact of legal enforcement of various services and utilities that resulted in the increased cost of housing (p. 19). Third, Bauer clarified the unique situation in America where housing policy began with slum clearance in contrast to the European housing policies whose main purpose was developing planned neighborhoods of modern dwellings quickly and cheaply (Bauer, 1934, p. 243). The barrier to large-scale provision of affordable housing in America was land cost resulting from the high cost of assembling a site. Bauer went on to identify three distinct economic types of slums: exploitation-slums which are "overcrowded and therefore profitable and expensive;" speculation-slums which "may or may not be overcrowded, but whose land-prices are based, not on present profits, but on speculation as to more intensive future use; and blighted areas which have lost a large part of its population and therefore not on a paying basis...which offers no near hope of being turned to more intensive use" (Bauer, 1934, p. 244).

In her review Bauer identified an organized and well-informed consumer demand as having driven the housing movement and improved social housing throughout Europe (Oberlander & Newbrun, 1999, p. 113). It was the lack of this organized consumer demand, according to Bauer, that resulted in the obstacles to modern housing solutions in the U.S.

As a community activist, Bauer demonstrated her skill as an organizer. She spoke to women's groups and labor unions and persuaded them to establish housing committees (Oberlander & Newburn, 1999, p. 119; von Hoffman, 2005, p. 239). In 1934 she prepared a policy brief for President Roosevelt arguing that the 1934 National Housing bill to create a Federal Housing Administration and a Federal Savings and Loan Insurance Corporation (FSLIC) would not solve housing problems. According to Bauer, the bill reflected "a conspiracy between organized real estate and banking interests to keep the housing movement as innocuous and impotent as possible" (Oberlander & Newburn, 1999, p. 120). She argued that the "production of adequate housing for those who needed it had to be treated separately from slum clearance" (p. 120). Furthermore, she proposed the formation of a presidential commission to study the American housing problem. She traveled around the country promoting housing policies including then radical ideas about collective land ownership as a means of making housing more affordable (p. 126).

In 1936 the Wagner-Ellobogen bill, another housing act, was proposed "to provide financial assistance to States and political subdivisions thereof for the elimination of unsafe and unsanitary housing conditions, for the development of decent, safe and sanitary dwellings for families of low income and for the reduction of unemployment and the stimulation of business activity" (Oberlander & Newburn, 1999, p. 141). Unfortunately, the House Banking and Currency Committee failed to act on the bill, thus it died.

Bauer and others continued their efforts to promote housing policy. The following year they were successful in having the Wagner-Seagall United States Housing Act of 1937 enacted (McDonnell, 1957, p. 402). This policy articulated the commitment of housing as a key social and economic component in the national recovery. The legislation focused on two goals; first, to provide decent shelter for low-income families and second, to create employment opportunities (Birch, 1983, p. 154). Authorization of such activity, however,

was only one component in real action toward change. The allocated funds were insufficient to meet the act's mandate. Thus, the social action shifted from policy formation to implementation. Bauer took on a new responsibility, that of establishing the U.S. Housing Authority's Division of Research and Information. Bureaucratic work provided Bauer the opportunity to learn the workings of government and develop sympathy for the difficulties of public officials. These lessons she felt would be useful in her "normal role of agitator and heckler" (Oberlander & Newbrun, 1999, p. 163).

Catherine Bauer took on the role as a housing advocate and lobbyist promoting housing policy at the federal level. Without the detailed research by Edith Elmer Wood and the policy activism by Catherine Bauer it is questionable whether or not the national housing goal established by the 1937 Wagner-Steagall Act of "decent, safe, and sanitary" housing would have occurred (Birch, 1983, p. 169). Thirty years after Edith Elmer Wood articulated social policy goals to address the housing problem, her comprehensive program of clearance, building, loans, and code enforcement were incorporated into the U.S. Housing Act of 1949. This law established that the national goal is not only a "decent home" for every American but also a "suitable environment" addressing housing needs as encompassing the neighborhood conditions as well as the dwelling itself. To this end, the act included allocating resources for urban renewal. Bauer was a major proponent of this legislation. Opposition came from the National Association of Homebuilders of America, the National Association of Real Estate Boards, the National Savings and Loan League, the Mortgage Bankers Association of America and the U.S. Chamber of Commerce (Oberlander & Newbrun, 1999, p. 237). These powerful organizations felt strongly that housing should be a private sector concern and the government should not be involved in regulating or facilitating the housing market. The opposition was unable to prevent passage of legislation; however, it was able to force the modification of the bill to include requiring government assistance to utilize private enterprise wherever feasible (Housing Act of 1949). In the end there was support for Bauer's argument that private enterprise cannot provide housing for families with the lowest income; thus, it was the responsibility of government to assure that these families were adequately housed.

Discussion and Conclusion

Common themes regarding housing conditions emerge from the work of these four exemplars. Following the feminist perspective on scholarship, all four focused on issues critical to women's well-being, they drew on the lived experience of people themselves, and they focused on the political as well as the academic in an effort to improve the lives of individuals, families, and communities. In general, all four conducted research into tenement (rental) housing conditions documenting concerns regarding impact of overcrowding, housing cost and affordability, neighborhood conditions, and employment and economic conditions. All four housing scholars were dedicated to making a difference. The evidence they amassed regarding housing conditions was presented to decision-makers and influenced public policy outcomes.

Many of the policies that were enacted during the 1930s and 1940s provided the foundation of today's housing policy debates and directions. For example, following the U.S. Housing Act of 1932, the Works Progress Administration (WPA) Housing Division began to allocate funds for housing projects. The reaction of local businessmen and government officials was typically more enthusiastic regarding tearing down slums than building new homes for the urban poor (von Hoffman, 2005, p. 232). Today's HOPE VI program to "revitalize" severely distressed public housing follows a similar pattern. For many projects, HOPE VI resulted in the demolition of public housing subsequently replacing it with mixed-income housing developments that substantially reduced the number of units available for low-income households (Crump, 2002). Such trends reinforced the opinion of Edith Elmer Wood that housing programs should focus on providing quality affordable housing for the masses, as programs addressing needs of the very poor, most difficult to house, were most likely to fail. Wood felt that successfully addressing the housing needs of the working class would create political support for providing housing for the very poor as well (von Hoffman, 2005, p. 236). Yet, while programs providing housing for households with a wider spectrum of income may be more politically acceptable, they are less likely to address the housing needs of low- and very-low income households.

Another contemporary trend is the shift toward nonprofit and faith-based housing developments. The involvement of major religious

denominations has been a key part of the political strategy of public housing advocates since 1935 (von Hoffman, 2005, p. 238). However, not all of the advocacy and organizing approaches used by early housing advocates are still viable today. Two key groups that housing advocates Addams, Richards, and Wood targeted for support of public involvement in housing were social workers and organized labor (von Hoffman, 2005, pp. 234, 238). Today, neither group has the political influence that they once held.

Women influenced early housing policy in two distinct ways. First of all they insisted that it was the responsibility of the government to build homes for the low-income slum dweller because the private sector would not do so (Krueckenberg, 1983, p. 151). Furthermore, they insisted that this public housing be more than minimum shelter; that it support families and enhance their well-being by extending the view of adequate housing to include the neighborhood (p. 152).

The example provided by the four housing heroines illustrates the power and tradition of social action research within housing studies. The work of early feminists inspires contemporary housing researchers to move beyond the comfort zone of academic focused scholarship and consider the potential of social action research. For housing activists, the impact of research-based policy action is highlighted.

Yet, despite efforts of these female housing activist researchers, highly effective consumer and reform movements never developed. A key reason for this failure was that the housing movement lacked popular grassroots support and a charismatic leader (von Hoffman, 2005, 237). As Edith Elmer Wood pointed out, “the housing movement remains anemic, the great bulk of the people are indifferent” (Wood, 1919, p. 287). Catherine Bauer further clarified this lack by stating, “movements are not made by a handful of specialists” (Birch, 1983, p. 253). Thus, she noted that the lack of interest by the majority of people is fostered by a cultural norm of individualism that dominates and underlies housing policy. In the end, support for public involvement in housing is “widespread but not deeply rooted” (von Hoffman, 2005, p. 242).

Krueckenberg (1983) asserted that women’s participation in housing reform had “social acceptability because the reformers operated within the traditional sphere of women’s interests which they merely expanded from

their own homes to the city, and later, the nation” (p. 172). Referring to this extension of women’s role to include what has been called “municipal housekeeping,” Kueckenberg (1983) also pointed out that

[e]ven though women were successful in exercising this leadership in the early years of the modern housing movement, they did not sustain it. In one important sense, they failed. For when the stakes became high, in terms of large government expenditures, they had not convinced their followers of the necessity of their design concepts, nor even of the efficacy of a wide-spread national housing program. So as they lost their position, their clearly stated goals and ideas vanished also (p. 172).

This failure by women to maintain a key leadership position in shaping housing policy has persisted into the current era. It is the viewpoint of Barbara Rahder and Carol Altalia (2004) that the reason today that “feminism is less visible in planning theory is possibly because women’s issues have once again become marginalized” (p. 108). The nineteenth century first wave feminists raised critical social issues of their time, yet the movement faltered due to ideological differences among the feminists themselves (Rahder & Altalia, 2004, p. 109). Second wave feminist women reformers of the twentieth century in the 1960s focused on issues of women’s economic rights, but again were challenged by the third wave of feminists who acknowledged the tremendous diversity among women and ways of knowing that were excluded or silenced by the liberal white feminist ideology. This perspective raises the question of whether or not it is possible to incorporate the ideals of all three waves of feminist thinking and apply it to the twenty-first century concerns.

The position of women as housing researchers and policy advocates, however, has not completely disappeared. There are a number of notable exceptions. Cushing Dolbeare, for example, provided leadership in forming the National Low Income Housing Coalition (Pitcoff, 2002). However, the assertion put forth by Kueckenberg (1983) that women lost their leadership position in the housing movement alerts us to the challenge for today. Can the tradition of social action research be revived? Can contemporary housing scholars address the emerging research agenda and provide evidence that will, in fact, influence public policy? Can we draw on the feminist perspective to develop recommendations that will improve the housing outcomes for women,

children, families, and individuals? Will our recommendations influence policies that improve urban neighborhoods, address the needs of persistent poverty in rural areas, and set the stage for a brighter housing future?

Over ten years ago in a speech at the Conference on Federal Housing and Community Development Policy in Transition, Peter Dreier provided a blueprint for building a movement for decent housing. In his speech Dreier laid out five steps toward changing the public debate and political agenda in order to move housing from a marginal political position to a key domestic policy issue. His steps included: (a) document the housing crisis; (b) restore public confidence in housing programs; (c) expand allies by pointing out that affordable housing is good for business and that it creates jobs; (d) find a common ground among housing activists, and (e) mobilize and consolidate constituencies to form a base of support. These steps summarize the actions taken by the “housing heroines” illustrated here and provide a map for today’s scholar-activists.

Among the critical housing issues facing U.S. policymakers today are a lack of affordable quality housing; a disparity in homeownership rates by race and ethnicity; the emphasis on homeownership in conjunction with deregulation of the banking industry and the rise in predatory lending practices; the demolition of public housing under the guise of deconcentration of poverty; and the cutbacks in Section 8 tenant-based rent assistance. Health issues and housing conditions remain another concern. In all these issues differences by gender and class must be included in the research and public policy recommendations. Yet, for research to make a difference there is an understanding that “the determination to connect understanding and change is more than a research methodology—it is also a political act” and as such, it is feminist scholarship (Mirrane & Young, 2000, p. 4).

References

- Addams, J. (1902). The housing problem in Chicago. *Annals of the American Academy of Political and Social Science*, 20, 97-107.
- Addams, J. (1910). *Twenty years at Hull-House with autobiographical notes*. New York: The Macmillan Company.
- Avison, D., Lau, F., Myers, M. & Nielsen, P.A. (1999). *Action research. Communications of the AHC*, 42(1), 94-97.
- Bauer, C. (1934). *Modern housing*. Cambridge, MA: The Riverside Press.

- Birch, E. L. (1983). Women-made America: The case of early public housing policy. In D. A. Krueckenberg (Ed.) *The American planner: Biographies and recollections* (pp. 149-175). New York: Methuen.
- Chafetz, J. S. (2004). Bridging feminist theory and research methodology. *Journal of Family Issues*, 25(7), 963-977.
- Crump, J. R. (2002). Deconcentration by demolition: Public housing, poverty and urban policy. *Environment and Planning D: Society and Space*, 20(5), 581-596.
- Ellen Swallow Richards. (n.d.). Chemical archives: The human face of chemical sciences. Retrieved October 5, 2004, from www.chemheritage.org
- Gries, J. M., & Ford, J. (1932). *Housing objectives and programs: The President's conference on home building and home ownership*. Washington, DC: National Capital Press, Inc.
- Housing Act of 1949. Public Law 171, 63 stat. 413-444. 81st Congress, 1st session, ch 338, July 14, 1949.
- Krueckenberg, D. A. (1983). *The American planner: Biographies and recollections*. New York: Methuen.
- LeCompte, M.D., & Preissle, J. (1993). *Ethnography and qualitative design in educational research*. New York: Academic Press.
- Little, J. (1994). *Gender, planning and the policy process*. London: Pergamon.
- McAuley Institute. (2003). *Women and housing: A status report*. Retrieved March 3, 2004, from <http://www.mcauley.org>
- McDonnell, T. L. (1957). *The Wagner Housing Act: A case study of the legislative process*. Chicago: Loyola University Press.
- McTaggart, R. (1991) Principles for participatory action research. *Adult Education Quarterly*, 41(3), 168-187.
- Miranne, K. B., & Young, A. H. (Eds.) (2000). *Gendering the city: Women, boundaries and visions of urban life*. New York: Rowman & Littlefield Publishers, Inc.
- National Housing Act. Pub.L. No. 479, 73rd Congress, Sess. II., Ch. 847. June 27, 1934.
- Oberlander H. P., & Newbrun, E. (1999). *Houser: The life and work of Catherine Bauer*. Vancouver: University of British Columbia Press.
- Pitcoff, W. (2002). Cushing Dolbeare: A Life in Housing. *Shelterforce Online Issue #122* (March/April). Retrieved April 22, 2003 from <http://www.nhi.org/online/issues/122/Dolbeare.html>
- Rahder, B., & Altalia, C. (2004). Where is feminism in planning going? Appropriation or transition? *Planning Theory*, 3(2), 107-116.

- Richards, E. H. (1905). *The cost of shelter*. New York: John Wiley & Sons.
- Stage, S., & Vincenti, V. B. (1997). *Rethinking home economics: Women and the history of a profession*. Ithaca, NY: Cornell University Press.
- Stoecker, R., & Bonacich, E. (1992, Winter). Why participatory research? Guest editors' introduction. *American Sociologist*, 23, 5-15.
- Thompson, P. J. (2002). *The accidental theorist: The double helix of everyday life*. New York: Peter Lang.
- U.S. Department of Housing and Urban Development. (2007, Oct. 10). *Demolition/Disposition*. Retrieved October 28, 2007 from http://hud.gov/offices/pih/centers/sac/demo_dispo/index.cfm
- U.S. Housing Act of 1937. Wagner-Seagall Act. Public Law 412. 75th Congress, 1st Session, ch 896, 888-899. September 1, 1937.
- Von Hoffman, A. (2005). The end of the dream: The political struggle of America's public housers. *Journal of Planning History*, 4(3), 222-253.
- Winslow, C-E. A. (1916). The laboratory in the service of the state. *American Journal of Public Health*, 6(3), 222-333.
- Wood, E. E. (1919). *The housing of the unskilled wage earner: America's next problem*. New York: Macmillan.

HOME OWNERSHIP AND HOUSING COST BURDEN: A COMPARISON OF VETERANS AND NON-VETERANS

Greg A. Greenberg and Robert A. Rosenheck

Abstract

Past research has found that veterans are at modestly greater risk than non-veterans for homelessness. Most attempts to explain these findings have focused on sociodemographic risk factors such as age, race, and prevalent mental illness. Less attention has been given to a potential proximate explanation of homelessness, housing status (i.e., home ownership and housing cost burden). We used data from the 2006 American Community Survey to examine whether male veterans in age-race/ethnic groups at greatest risk of homelessness are also less likely to own a home than matched male non-veterans, and whether they have a greater likelihood of experiencing housing cost burdens that could put them at risk of homelessness. Compared to non-veterans, recently discharged veterans and veterans from the immediate post-Vietnam era, veteran cohorts at greatest relative risk of homelessness were significantly less likely than their non-veteran peers to own their home while other cohorts of veterans were significantly more likely to own their home. However, veterans of virtually all ethnic and age groups were significantly and substantially less likely than their non-veteran peers to experience severe housing cost burdens. These data suggest that housing status does not explain the increased risk of homelessness among selected veteran subgroups.

Introduction

There is increasing concern that veterans and especially younger veterans of the current conflicts in the Middle East may be at greater risk than non-veterans for homelessness. Most previous studies have found that veterans are at modestly greater risk for homelessness than non-veterans with substantial differences between age cohorts (Calsyn & Roades, 1994;

Greg Greenberg is with VA New England Mental Illness, Research, Education and Clinical Center, VAMC West Haven, CT, and Lecturer, Yale University Department of Psychiatry, New Haven, CT. Robert Rosenheck is with VA New England Mental Illness, Research, Education and Clinical Center, West Haven, CT, and Professor, Department of Psychiatry and Yale University School of Epidemiology and Public Health, New Haven, CT.

Cunningham, Henry, & Lyons, 2007; Gamache, Rosenheck, & Tessler, 2001; Rosenheck, Frisman, & Chung, 1994; Rosenheck, Leda, Frisman, Lam, & Chung, 1996). While there is less risk of homelessness among World War II and Korean era veterans than among similarly aged non-veterans and Vietnam era veterans are at slightly greater risk than their non-veteran peers, veterans from the early period of the All Volunteer Force (AVF) (1973-1980) are at four-times greater risk for homelessness than non-veterans of similar age (Gamache et al., 2001; Rosenheck et al., 1996; Rosenheck et al., 1994).

These results are difficult to explain since veterans of all eras tend to be similar to, or better off than non-veterans in the general population in education, employment, and income (Cunningham et al., 2007; Rosenheck et al., 1994; Rosenheck et al., 1996; Tessler, Rosenheck, & Gamache, 2003), characteristics that should lower their risk of homelessness (Calsyn & Roades, 1994; Caton et al., 2000; Caton et al., 2005; Shinn, 2007; Shinn & Weitzman, 1996). Additionally, veterans have access to special benefits, such as Department of Veterans Affairs (VA) home loan guarantees, pensions, disability payments, and educational assistance as well as to specialized medical programs for homeless veterans and a wide variety of medical, psychiatric, and substance abuse services through the Veterans Health Administration (Justus, Burling, & Weingardt, 2006; Nyamathi et al., 2004; Rosenheck et al., 1996; Cunningham et al., 2007).

One potential explanation for these anomalous findings is that although veterans are better off than non-veterans in terms of general protective factors, they may be more likely than non-veterans to have other characteristics that put them at greater risk for homelessness, either due to the negative effects of their military service or because of selection factors associated with recruitment. It has been suggested that the negative effects of combat, for example Post Traumatic Stress Disorder, might increase the risk for homelessness (Goldin, 1982; Robertson, 1987) but data from national surveys and VA homeless programs show that veterans that served during peacetime following the Vietnam war are at greater risk of homelessness than those who served during the Vietnam era (Mares & Rosenheck, 2004; Rosenheck, Gallup, & Leda, 1991; Rosenheck & Koegel, 1993; Rosenheck et al., 1996).

Recruiting conditions appear to offer a better explanation for differences in the risk of homelessness across different veteran cohorts. The lack of differences between World War II and Korean era veterans and equivalently aged non-veterans in their risk for homelessness (Gamache et al., 2001; Rosenheck et al., 1994; Rosenheck et al., 1996) is likely due to the fact that during these service eras enlistees were more representative of the population of draft-eligible young men (Gamache et al., 2001) and enjoyed extensive VA benefits. In contrast, the Vietnam era draft drew on a relatively modest percentage of the large baby boom generation and there is some evidence that deferments and exemptions allowed better off men with more education to avoid service during this era (Angrist & Krueger, 1994; Cohaney, 1992; Small, 1999).

As a result of the well documented recruitment difficulties caused by the unpopularity of military service following the Vietnam War, veterans of the immediate post-Vietnam era (i.e., the early years of the All Volunteer Force [AVF]) tended to have poor employment prospects in the civilian economy and greater rates of mental illness than their non-veteran peers. In consequence they are at two to four times greater risk for homelessness as compared to non-veterans of similar age (Gamache et al., 2001; Mares & Rosenheck, 2004; Rosenheck et al., 1994; Tessler et al., 2003). Enlistees from this period had lower socioeconomic status, a lower likelihood of high school graduation, poorer intellectual aptitude test results and greater problems with substance abuse than their peers and were, perhaps for these reasons, at greater risk of homelessness after their military service (Bray, Marsden, Guess, Wheeless, & Pate, 1986; Cahalan, Cisin, Gardner, & Smith, 1972; Cooper, 1977; Gamache et al., 2001; Kim, Nestel, Phillips, & Borous, 1980; Laurence, Ramsberger, & Gribben, 1989; Polich, 1981; Rosenheck et al., 1994; U.S. Department of Defense, 1990). Given that incarceration may increase the risk of homelessness by weakening community and family ties as well as by limiting opportunities for employment and access to public housing (Kushel, Hahn, Evans, Bangsberg, & Moss, 2005; Travis, Solomon, & Waul, 2001), the greater criminal justice system involvement of veterans that served in the early AVF (Greenberg & Rosenheck, n.d.; Greenberg, et al., 2007) may have also increased the risk of homelessness for this cohort of veterans.

In later periods of the AVF, improvements in the quality of recruits due to increased military salaries, more experience and skill in recruiting, and a zero-tolerance policy toward drug use (Gamache et al., 2001; Rosenheck et al., 1996; Tessler et al., 2003; Bachman, Freedman-Doan, O'Malley, Johnston, & Segal, 1999; Dorn, 1996; Eitelberg, 1996; Hogan, Simon, & Warner, 2004) may explain the lowering of the relative risk of homelessness in these later cohorts (Gamache et al., 2001; Rosenheck et al., 1996) although they still seem to be at substantially greater risk than their non-veteran counterparts.

While these background characteristics are suggestive, they do not offer clear proximate explanations for differences in the relative risk of homelessness among veterans in different age cohorts. In this study we seek to compare the housing status of domiciled veterans and non-veterans in different racial/ethnic groups and age cohorts. We hypothesized that the risk of homelessness is increased, in part, by reduced home ownership and greater housing cost burden, i.e., having to pay a higher proportion of income for housing. We also hypothesized that those veteran cohorts with the greatest relative risk of homelessness (i.e., veterans of the early AVF) will be those with the lowest rates of home ownership and the greatest housing cost burden. Research clearly suggests that lack of affordable housing is a major risk factor for homelessness (Burt, 1991; Dolbeare, 1996; O'Flaherty, 1996; Mansur, Quigley, Raphael, & Smolensky, 2002; Quigley & Raphael, 2000) and by implication cohorts that have poorer housing resources may be at greater risk of homelessness than their non-veteran peers.

For this study, we used 2006 data from the American Community Survey (ACS), a nationally representative survey of income, housing status, and housing costs conducted annually by the U.S. Census Bureau, to examine whether male veterans in various age-race cohorts were more or less likely than matched male non-veterans to own a home; and secondly, regardless of whether they own their home or rented housing, whether they have a greater likelihood than male non-veterans of experiencing a severe housing cost burden that could put them at risk of becoming homeless. We hypothesized that male veterans in age-race cohorts at greatest risk of homelessness would be less likely to own a house and more likely to face severe housing cost burdens relative to their male non-veteran peers. More specifically, we

hypothesized that the youngest male veterans, those who are more likely to be facing adjustment difficulties in post-military civilian life, and male veterans who enlisted during the early AVF, would be less likely to own a home and more likely to face severe housing cost burdens.

Methods

Source of data and sample

The ACS is designed to take the place of the decennial census long-form survey, and to provide annual estimates of housing and socio-economic characteristics for the nation, all states, most areas with a population of 250,000 or more, and selected areas and population groups of 65,000 people or more. In 2006 the ACS included data from respondents for 1,263,185 households and 80,683 individuals in group quarters, such as college residence halls, skilled nursing facilities, and university dorms. Including themselves, household respondents provided information for 2,889,058 individuals in their households.

The data were constantly collected throughout 2006 using mail-out/mail-back questionnaires, Computer-Assisted Telephone Interviewing (CATI), and Computer-Assisted Personal Interviewing (CAPI). A unique national sample of addresses was sent an ACS questionnaire each month. Census Bureau personnel telephoned non-respondent households during the second month of collection if a phone number was available and conducted personal visits during the third and last month of data collection for a subsample of the remaining non-respondent households. The 2006 ACS achieved an overall survey response rate of 97.5% (U.S. Census Bureau, 2008), calculated as the initially weighted estimate of interviews divided by the initially weighted estimate of cases eligible to be interviewed. The survey data were weighted to account for the sampling design and non-response, i.e., the weights compensated for differences in sampling across areas, for differences between the full sample and the interviewed sample, and for differences between the sample and independent estimates of basic demographic characteristics (for further details on the ACS survey see the 2006 U.S. Census Bureau Design and Methodology and the 2006 Data Users Handbook at <http://www.census.gov/acs/www/>). The data for the 2006 ACS

sample are contained in two hierarchical files, one containing household level records and the other person level records, which are each associated with a specific household (with the exception of records for individuals living in group quarters). There were several steps to the preparation of these data for our use. First, we extracted several items from the household records and linked those data to the appropriate person level records. Next, we removed person level records for individuals who were under the age of 19 years, women, and individuals who were active duty personnel in the military from the sample, resulting in an analytic sample of 1,052,840 responses that represented slightly more than 106 million Americans. Women were removed from the sample due to their very low representation among several cohorts of veterans. Finally, we proportionally down-weighted the sample so that our statistical tests would not be overly sensitive to the large estimated population. A new weight measure was created by dividing the existing final weight by the average number of Americans represented by each case in the full sample (i.e., $299,398,485/2,969,741 = 100.82$). The downweighted analytic sample we used contained 1,056,770 cases.

Measures

Housing status and severe housing cost burden. A dichotomous measure of home ownership was created that indicated whether an individual lived in a home that was owned by the resident household. Two additional dichotomous measures indicated whether the individual was part of a household with a severe housing cost burden—one measure for individuals living in an owner-occupied unit and another for individuals living in a rented apartment or house. Severe housing cost burden for residents of an owner-occupied unit was defined as monthly housing cost that exceeded 50% of monthly household income (U.S. Department of Housing and Urban Development, 2005). Owner costs included: payments for debts on the property, such as mortgages and home equity loans; real estate taxes; condominium fees; insurance on the property, utility costs, and fuel. For owner-occupied mobile homes owner costs include land or site rent, registration fees, and license fees.

For households living in a rental unit, the household was considered to have a severe housing cost burden if their monthly gross rent (contract rent and cost of utilities) was more than 50% of total income.

Sociodemographic characteristics. Two sets of dichotomous measures were created to represent race/ethnicity (white, Black, Hispanic, Asian and Other) and age. Individuals who reported more than one racial or ethnic category were classified as “Other” with the exception of individuals who reported being white and Hispanic, who were classified as being Hispanic. Age was summarized in six categories: 19 to 29, 30 to 39, 40 to 49, 50 to 59, 60 to 69, and 70 years and older. These age categories were constructed to represent the highest proportion possible of veterans who served in the following specific service periods: the World War II and Korean Eras (1955 and earlier), Interwar (1956-1965), Vietnam (1966-1975), early All Volunteer Force (1976-1985), mid-All Volunteer Force (1986-1995), and recent All Volunteer Force (1996-2006). We based this categorization on the assumption that veterans were typically 19 years of age on average when they enlisted and that the periods of enlistment for each era were as follows: World War II from 1940 to 1947, the Korean War from 1950 to 1955, the Vietnam era from 1964 to 1975, and the first two decades of the All Volunteer Force (AVF) following 1973 (early and middle period) plus the most recent 11 years, 1996-2006 (late AVF period). Although these age categories imperfectly match individuals to service eras, due to past experience with this technique (Greenberg & Rosenheck, n.d.; Greenberg, G., & Rosenheck, 2007; Greenberg, Rosenheck, & Desai, 2007), we believe it does properly classify most veterans.

Analysis

There were two steps to our analysis. First, we determined the percentage of homeowners among male veterans and also among the male non-veteran population stratified by age and race/ethnicity. For each age-race/ethnic group we also estimated a relative risk ratio using a modified Poisson regression approach to calculate the likelihood of home ownership for male veterans as compared to male non-veterans. Next, for each age-race/ethnic group we estimated the percentage of veterans and the percentage of non-veterans that lived in a household with a severe housing cost burden. Again, modified Poisson regressions were used to determine whether male veterans were at greater risk of living in a household with a housing burden than male non-veterans. These analyses were conducted separately for homeowners and renters.

Although binary outcomes in cohort studies are often analyzed by the use of logistic regression to obtain odds ratios, it is preferable to estimate a relative risk ratio if the outcome is relatively common (i.e., an incidence of 10% or more) because of the increasing differential between relative risk ratios and odds ratios with increasing incidence rates, and there is a tendency to misinterpret odds ratios as if they were relative risk ratios (Greenland, 2004; McNutt, Wu, Xue, & Hafner, 2003; Zou, 2004). We used a “modified Poisson” approach (Zou, 2004) to estimate the relative risk and confidence intervals because log-binomial models failed to converge. All statistical modeling was done with the procedure PROC GENMOD of the SAS® software system (SAS Institute, Cary, NC) version 8.0. Robust error variances were estimated using the repeated statement and the subject identifier. We only presented and discussed results for a category (race/ethnicity by age cohort) of veterans or non-veterans in which there were at least 30 individuals that had the status of interest (i.e., owned a home or had a severe housing cost burden).

Results

Home ownership

The top two panels of Table 1 show the percentage of homeowners among age-race/ethnic categories of veterans and non-veterans. There was a substantial increase by age in the percentage of both male veterans and male non-veterans who were home-owners. Minorities, with the exception of some Asian and Hispanic groups, were much less likely than whites to own a home. Rates of home ownership among cohorts of Hispanic veterans were also only modestly lower than that of white veterans.

The bottom panel of Table 1 shows the likelihood of home ownership among age-race/ethnic categories of veterans as compared to non-veterans (i.e. the relative risk ratio of home ownership calculated with a modified Poisson regression). When all racial/ethnic groups are combined together, veterans in the 19 to 29 and the 40 to 49 aged cohorts (the youngest group and the immediate post-Vietnam era groups) were significantly less likely than their peers to own a home (risk ratios of .90 and .96 respectively). Veterans in the other four cohorts were significantly more likely than non-veterans to own a

Table 1. Percentage of Homeowners among Male Veterans and Non-Veterans as well as the Relative Risk Ratio of Being a Home Owner for Veterans as Compared

Race/ Ethnicity	Age					
	19-29	30-39	40-49	50-59	60-69	70 and >
	Percentage of Veteran Population Who Own a Home					
White	47.2%	66.8%	74.4%	84.0%	88.2%	85.7%
Black	31.5%	48.8%	58.0%	63.0%	69.8%	73.7%
Hispanic	42.4%	58.7%	68.6%	76.1%	79.6%	79.1%
Asian	45.6%	67.1%	74.0%	84.6%	83.6%	81.1%
Other	35.5%	51.9%	58.4%	67.4%	74.0%	76.3%
All Males	43.8%	62.9%	70.7%	80.9%	86.3%	84.7%
	Percentage of Non-Veteran Population Who Own a Home					
White	54.9%	70.8%	80.6%	84.3%	86.5%	79.7%
Black	37.1%	43.3%	53.3%	59.6%	64.3%	62.9%
Hispanic	38.5%	45.5%	57.0%	62.7%	65.2%	63.5%
Asian	46.4%	56.3%	70.2%	73.6%	76.4%	68.3%
Other	42.5%	48.6%	61.5%	68.2%	67.0%	69.8%
All Males	48.6%	61.2%	73.6%	78.9%	81.3%	75.4%
	Relative Risk Rate Ratio and Confidence Intervals (Without Risk Adjustment)					
White	.86 (.83-.89)	.94 (.93-.96)	.92 (.91-.93)	.99 (.99-1.00)	1.02 (1.01-1.03)	1.07 (1.07-1.08)
<i>p</i> -value	<.0001	<.0001	<.0001	.24	<.0001	<.0001
Black	.85 (.75-.96)	1.13 (1.06-1.20)	1.09 (1.05-1.13)	1.06 (1.03-1.09)	1.09 (1.05-1.13)	1.17 (1.13-1.22)
<i>p</i> -value	.0077	.0001	<.0001	.0005	<.0001	<.0001
Hispanic	1.10 (.99-1.22)	1.29 (1.21-1.37)	1.20 (1.15-1.26)	1.21 (1.17-1.26)	1.22 (1.17-1.27)	1.24 (1.20-1.29)
<i>p</i> -value	.065	<.0001	<.0001	<.0001	<.0001	<.0001
Asian	.98 (.80-1.20)	1.19 (1.08-1.32)	1.05 (.98-1.14)	1.15 (1.10-1.21)	1.09 (1.04-1.16)	1.19 (1.13-1.25)
<i>p</i> -value	.87	.0006	.17	<.0001	.0011	<.0001
Other	.84 (.70-1.00)	1.07 (.95-1.19)	.95 (.88-1.03)	.99 (.93-1.05)	1.10 (1.03-1.18)	1.09 (1.01-1.19)
<i>p</i> -value	.051	.26	.19	.68	.004	.029
All Males	.90 (.87-.93)	1.03 (1.01-1.05)	.96 (.95-.97)	1.03 (1.02-1.03)	1.06 (1.05-1.07)	1.12 (1.12-1.13)
<i>p</i> -value	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

home. However, the differences between veterans and non-veterans in three of these four cohorts were fairly small with risk ratios ranging from 1.03 to 1.06.

The two oldest cohorts of white veterans (greater than age 60; risk ratios of 1.02 and 1.07) and veterans classified as “other” (risk ratios of 1.10 and 1.09) were significantly more likely than their peers to own a home. However, the three youngest groups of white veterans were significantly less likely than their peers to own a home (risk ratios of .86, .94, and .92).

In contrast to white veterans and veterans classified as “other,” almost all cohorts of Black, Hispanic, and Asian veterans were significantly more likely than their non-veteran peers to own a home. Hispanic veterans in particular, were much more likely than their peers to own a home (all but one cohort had risk ratios that ranged from 1.21 to 1.29). The risk ratios for home ownership of the 10 cohorts of Asian and Black veterans above 30 years of age ranged, somewhat more modestly, from 1.05 to 1.19. Among the four minority groups only the youngest cohort of Asian and Black veterans were less likely than their non-veteran peers to own a home (risk ratios of .98 and .85, the former of which was not significant).

Severe housing cost burden among home owners

The top two panels of Table 2 show the percentage of veterans and non-veterans in each age-race/ethnic category that were part of a home-owning household with severe housing cost burdens. The percentage of male veterans and male non-veterans that were part of a home-owning household with a severe housing cost burden increased slightly with age. Minority veterans and non-veterans were disadvantaged in that they were more likely than whites to experience severe housing cost burdens. Thus, the results from Tables 1 and 2 indicate that not only were members of most minority groups (among both veterans and non-veterans) less likely to own a home than whites, they were also more likely to experience a severe housing cost burden.

The lower panel of Table 2 shows the relative risk of residing in a home-owning household facing a severe housing cost burden among veterans as compared to non-veterans. The last row--in which all race/ethnic groups were combined--indicates that among homeowners, veterans in all six cohorts have a much lower risk than non-veterans of being part of a home-owning household with a severe housing cost burden with little variation by age cohort.

Table 2. Among Home Owners: Percentage of Male Veterans and Non-Veterans that are Part of a Household with a Severe Housing Cost Burden as well as the Relative Risk Ratio of Being Part of a Household with a Severe Housing Cost Burden for Veterans as Compared to non-Veterans

Race/ Ethnicity	Age					
	19-29	30-39	40-49	50-59	60-69	70 and >
Percentage of Veteran Population Who are Part of a Household with a Severe Housing Cost Burden						
White	5.1%	5.4%	5.4%	5.8%	6.9%	6.2%
Black	11.2%	8.0%	8.9%	10.7%	13.2%	14.5%
Hispanic		11.2%	8.6%	8.0%	10.9%	8.8%
Asian			10.5%	8.2%	13.3%	7.5%
Other			9.8%	10.3%	9.9%	11.3%
All Males	6.6%	6.4%	6.3%	6.5%	7.5%	6.7%
Percentage of Non-Veteran Population Who are Part of a Household with a Severe Housing Cost Burden						
White	6.1%	6.8%	6.9%	6.8%	8.1%	8.4%
Black	12.1%	12.0%	12.1%	12.8%	15.8%	18.0%
Hispanic	14.2%	18.5%	16.9%	14.7%	16.2%	15.7%
Asian	14.9%	13.3%	15.8%	13.9%	13.7%	17.9%
Other	9.9%	10.9%	12.1%	12.7%	11.3%	10.2%
All Males	8.4%	9.4%	8.8%	8.3%	9.6%	10.4%
Relative Risk Rate Ratio and Confidence Intervals (Without Risk Adjustment)						
White	.85 (.69-1.04)	.79 (.70-.88)	.79 (.73-.85)	.86 (.82-.91)	.86 (.81-.91)	.74 (.70-.78)
<i>p</i> -value	.12	<.0001	<.0001	<.0001	<.0001	<.0001
Black	.92 (.64-1.35)	.67 (.51-.87)	.74 (.62-.87)	.83 (.72-.95)	.83 (.72-.97)	.81 (.70-.93)
<i>p</i> -value	.69	.0025	.0005	.008	.016	.0035
Hispanic		.61 (.47-.78)	.51 (.40-.64)	.54 (.44-.67)	.67 (.55-.83)	.56 (.46-.69)
<i>p</i> -value		<.0001	<.0001	<.0001	.0002	<.0001
Asian			.66 (.44-.99)	.58 (.42-.82)	.96 (.72-1.29)	.42 (.32-.56)
<i>p</i> -value			.044	.0019	.82	<.0001
Other			.81	.81	.87	1.12
<i>p</i> -value			(.56-1.18)	(.62-1.06)	(.62-1.22)	(.75-1.66)
All Males			.71			
<i>p</i> -value	.78 (.66-.91)	.68 (.62-.74)	(.67-.76)	.78 (.74-.82)	.78 (.74-.81)	.64 (.61-.68)
	.0023	<.0001	<.0001	<.0001	<.0001	<.0001

When veteran and non-veteran homeowners were disaggregated by race and ethnicity it was found that veterans in most age-race/ethnic categories were significantly less likely to live in a household with a severe housing cost burden. All cohorts of white and Black veterans older than 30 were significantly less likely than their peers to live in a household with a severe housing cost burden (risk ratios between .67 to .86). Hispanic and Asian veteran cohorts for whom we have adequate data were at even lower relative risk for experiencing a severe housing cost burden (risk ratios between .42 to .66). As with home ownership, Hispanic veterans were the best off compared to their non-veteran peers, thus seeming to benefit from military service. The youngest cohorts of white and Black veterans, Asian veterans from the interwar period, and all cohorts of veterans classified as "Other race", did not have risk ratios that significantly differed from 1.

Severe housing cost burden among renters

The top two panels of Table 3 show that there was a small but steady increase by age groups in the percentage of male veteran and non-veterans in rented homes who experienced severe housing cost burdens. With only a few exceptions, cohorts of minority veterans and non-veterans alike, were more likely than their white peers to be part of a household with a severe housing cost burden.

When the five racial/ethnic groups are combined, veterans in all six cohorts were found to be at lower relative risk than their peers of being renters with severe housing cost burdens (see last row of Table 3). Veterans in the youngest two cohorts had noticeably lower risk ratios than veterans in the four oldest cohorts (.57 and .63 versus .70 to .83), but all the ratios were substantially less than 1.0.

When veteran and non-veteran renters were disaggregated by race and ethnicity, white and Black veterans (in all but the oldest cohort of Blacks) were found to be significantly less likely than their non-veteran peers to be renters with severe housing cost burden. Among Hispanic veterans, three cohorts had a risk ratio that was significantly lower than 1.

Discussion

This study compared veterans and non-veterans in matching age and race/ethnic cohorts on the likelihood of owning a home and/or being part of a household that experienced severe housing-cost burden. This analysis was

Table 3. Among Renters: Percentage of Male Veterans and Non-Veterans that are Part of a Household with a Severe Housing Cost Burden as well as the Relative Risk Ratio of Being Part of a Household with a Severe Housing Cost Burden for Veterans as Compared to non-Veterans

Race/ Ethnicity	Age					
	19-29	30-39	40-49	50-59	60-69	70 and >
Percentage of Veteran Population Who are Part of a Household with a Severe Housing Cost Burden						
White	10.5%	7.8%	9.5%	12.8%	13.1%	19.4%
Black	8.5%	8.5%	13.7%	16.6%	19.7%	21.2%
Hispanic	9.6%	9.1%	14.7%	14.6%	18.1%	19.5%
Asian						
Other			16.2%	19.6%		
All Males	10.1%	8.6%	11.0%	13.9%	14.4%	19.6%
Percentage of Non-Veteran Population Who are Part of a Household with a Severe Housing Cost Burden						
White	18.8%	10.8%	13.0%	14.6%	17.9%	24.2%
Black	22.6%	17.1%	20.3%	21.4%	27.3%	24.3%
Hispanic	15.3%	16.0%	16.5%	17.9%	22.2%	30.4%
Asian	24.5%	12.3%	18.2%	19.5%	22.3%	24.7%
Other	19.7%	16.4%	18.7%	18.4%	15.8%	23.6%
All Males	18.7%	13.5%	15.5%	16.8%	20.7%	25.5%
Relative Risk Rate Ratio and Confidence Intervals (Without Risk Adjustment)						
White	.56 (.48-.66)	.72 (.62-.84)	.73 (.64-.83)	.87 (.79-.97)	.73 (.65-.82)	.80 (.73-.88)
<i>p</i> -value	<.0001	<.0001	<.0001	.0084	<.0001	<.0001
Black	.37 (.26-.53)	.50 (.38-.66)	.67 (.56-.80)	.78 (.66-.91)	.72 (.59-.88)	.87 (.70-1.08)
<i>p</i> -value	<.0001	<.0001	<.0001	.0015	.0014	.21
Hispanic	.63 (.43-.93)	.57 (.39-.83)	.89 (.65-1.22)	.82 (.60-1.11)	.82 (.59-1.14)	.64 (.49-.85)
<i>p</i> -value	.019	.0036	.47	.20	.23	.0017
Asian						
<i>p</i> -value						
Other			.87 (.60-1.26)	1.06 (.76-1.49)		
<i>p</i> -value			.45	.72		
All Males	.54 (.47-.62)	.63 (.56-.71)	.71 (.65-.78)	.83 (.77-.90)	.70 (.64-.76)	.77 (.71-.83)
<i>p</i> -value	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

used to investigate the hypothesis that male veterans in age-race cohorts at greatest risk of homelessness will be less likely to own a house and more likely to face severe housing cost burdens relative to their male non-veteran peers. Our findings did not confirm our hypothesis in that they do not suggest that those cohorts of veterans at greatest risk for homelessness relative to their non-veteran peers face high risk housing situations. Two cohorts of veterans were found to be slightly to modestly less likely to own a home and these two cohorts did coincide with the two cohorts of veterans at higher relative risk of homelessness, but whether a renter or home-owner, all six veteran age cohorts were found to be much less likely than their non-veteran peers to experience severe housing cost burdens.

We specifically expected that given the difficult recruiting conditions during the early years of the AVF and the military's lack of experience in volunteer recruitment, and because younger more recently discharged veterans are more likely to face adjustment difficulties in post-military civilian life, veterans from these two cohorts would be worse off than their non-veteran peers with respect to housing status. Although as noted above, the youngest cohort of veterans and veterans that served in the early years of the AVF were somewhat less likely than their non-veteran peers to own a home, both cohorts of veterans (whether renters or homeowners) were substantially less likely than their non-veteran peers to experience severe housing cost burdens.

Results disaggregated by race and ethnicity also failed to confirm our hypothesis. Previous studies have found that although the risk of homelessness for both minority veterans and minority non-veterans was higher than among whites, white veterans were generally at a higher relative risk of homelessness than their non-veteran peers while Black veterans are less likely to be homeless as compared to their non-veteran peers (Gamache et al., 2001; Rosenheck et al., 1994). The present study found that although minority veterans in cohorts older than 30 were significantly more likely than their peers to own a home, among white veterans only those older than 60 were more likely to own a home, a finding that is weakly consistent with our hypothesis. In contrast to home ownership, almost all veteran cohorts in all race/ethnic groups had a significantly and substantially lower risk for experiencing severe housing cost burden than their non-veteran peers. Since veterans in the

cohorts at greatest relative risk for homelessness were not at greater relative risk for being in households with severe housing cost burdens, these data add to, rather than resolve, the paradox that in spite of their numerous advantages, veterans in some age-race/ethnic groups are substantially more likely to be homeless than their non-veteran peers.

While the data on housing presented in this study do not show patterns of relative disadvantage among veteran cohorts at high relative risk for homelessness, disadvantages in these high-risk cohorts have been found in previous studies of the prevalence of mental illness (Rosenheck et al., 1994) and in criminal justice involvement (Greenberg & Rosenheck, n.d.; Greenberg, Rosenheck, & Desai, 2007). Veterans of the early AVF in particular have been found to have substantially higher rates of mental illness and criminal justice system involvement than their non-veteran peers, paralleling their risk of homelessness (Greenberg & Rosenheck, n.d.; Greenberg, et al., 2007; Rosenheck et al., 1994). However as shown here, they are not at high risk of experiencing high housing cost burdens.

One possible interpretation of these findings would be that the greater relative risk of homelessness among veterans as compared to non-veterans is simply not explained by economic factors, such as housing or employment status. Past survey research found that veterans as a whole and particularly veterans who served during the early AVF, were not at significantly greater risk of non-employment than their non-veteran peers (Greenberg & Rosenheck, 2007), just as in this study they were not at greater risk of experiencing high housing cost burdens. Additionally, as mentioned in the beginning of this study, veterans have greater access than non-veterans to various programs that facilitate access to housing through the VA, such as its Home Loan Guarantee program. The greater relative risk of veterans for homelessness may thus be better explained by the fact that veterans from some cohorts may have greater behavioral risks than their non-veteran peers, as indicated by greater risk of mental illnesses and of incarceration, presumably due to pre-military vulnerabilities.

Several potential limitations of our study deserve comment. Although the age categories were constructed to represent the highest proportion possible of veterans who served in each specific service periods, the specified age categories

do not perfectly identify service in these eras. In addition our method assumes that vulnerabilities that yield greater risk of homelessness in some cohorts than in others can be identified by comparing risk factors among cohorts in the general population. This associational method only weakly demonstrates causal relationships because it rests on the ecological fallacy, i.e., that causal relationships at the individual levels can be discerned from associations between higher risk burdens and outcomes at the population level.

Conclusion

Although some cohorts of veterans, especially those who served in the early years of the AVF, are at greater risk of homelessness than their non-veteran peers these high risk veterans do not have higher risk of experiencing severe housing cost burdens. Rather the opposite appears to be true. Thus, the greater risk of homelessness among some veteran cohorts does not seem to be explained by housing vulnerability. Rather, the greater risk of this cohort and veterans overall for homelessness may reflect behavioral vulnerabilities for mental illnesses and criminal justice involvement that reflect pre-military vulnerabilities.

References

- Angrist, J., & Krueger, E. (1994). Why do World War II Veterans earn more than nonveterans. *Journal of Labor Economics*, 12(1), 74-97.
- Bachman, J., Freedman-Doan, P., O'Malley, P. Johnston, L., & Segal, D. (1999). Changing patterns of drug use among U.S. military recruits before and after enlistment. *American Journal of Public Health*, 89(5), 672-677.
- Bray, R. M, Marsden, M. A., Guess, L. L., Wheelless, S.C., & Pate, D.K. (1986). *1985 worldwide survey of alcohol and nonmedical drug use among military personnel*. Research Triangle Park, NC: Research Triangle Institute.
- Burt, M.R. (1991). Causes of the growth of homelessness during the 1980s. *Housing Policy Debate*, 2(3), 903-936.
- Cahalan, D., Cisin, I.A., Gardner, G. L., & Smith, G. C. (1972). *Drinking practices and problems in the U.S. Army*. Washington DC: U. S. Department of the Army.
- Calsyn, R., & Roades, L. A. (1994). Predictors of past and current homelessness. *Journal of Community Psychology*, 22, 272-278.

- Caton, C. L., Dominguez, B., Schanzer, B., Hasin, D. S., Shrout, P. E., Felix, A., McQuiston, H., Opler, L. A., & Hsu, E. (2005). Risk factors for long-term homelessness: Findings from a longitudinal study of first-time homeless single adults. *American Journal of Public Health*, 95, 1753-1759.
- Caton, C. L., Hasin, D. S., Shrout, P. E., Opler, L. A., Hirshfield, S., Dominguez, B., & Felix, A. (2000). Risk factors for homelessness among indigent urban adults with no history of psychotic illness: A case-control study. *American Journal of Public Health*, 90, 258-263.
- Cohaney, S. R. (1992). *The Vietnam-Era cohort: Employment and earnings*. *Monthly Labor Review*, 115(6), 3-15.
- Cooper, R.V. (1977). *Military manpower and the all-volunteer force*. Santa Monica, CA: RAND.
- Cunningham, M., Henry, M., & Lyons, W. (2007). *Vital mission: Ending homelessness among Veterans*. Research reports on homelessness. Washington DC: National Alliance to End Homelessness Homeless Research Institute. Accessed on January 22, from <http://www.endhomelessness.org/content/article/detail/1837>
- Dolbear, C. N. (1996). Housing policy a general consideration. In J. Baumel, (Ed.), *Homelessness in America* (pp. 34-45). Phoenix: Oryx Press.
- Dorn, E. (1996). Sustaining the all-volunteer forces. In J. E. Fredland, C. Gilroy, R. D. Little, & W. S. Sellman (Eds.), *Professionals in the front line: Two decades of the all volunteer force* (pp. 3-22). London: Brassey's.
- Eitelberg, M. (1996). The all-volunteer force after twenty years. In J. E. Fredland, C. Gilroy, R. D. Little, & W. S. Sellman (Eds.), *Professionals in the front line: Two decades of the all volunteer force* (pp. 66-98). London: Brassey's.
- Gamache, G., Rosenheck, R., & Tessler, R. (2001). The proportion of veterans among homeless men: A decade later. *Social Psychiatry and Psychiatric Epidemiology*, 36, 481-485.
- Goldin, H. J. (1982). *Soldiers of misfortune*. New York: Office of the Comptroller.
- Greenberg, G., & Rosenheck, R. (n.d). Incarceration among male veterans: Relative risk of imprisonment and differences between veteran and non-veteran inmates. (under review)
- Greenberg, G., & Rosenheck, R. (2007). Risk of non-employment among male veterans and non-veterans: Are veterans at greater risk? *Monthly Labor Review*, 130(12), 23-31.

- Greenberg, G., Rosenheck, R., & Desai, R. (2007). Risk of incarceration among veterans and non veteran men: Are veterans of the all volunteer force at greater risk. *Armed Forces and Society*, 33, 337-350.
- Greenland, S. (2004). Model-based estimation of relative risks and other epidemiological measures in studies of common outcomes and in case control studies. *American Journal of Epidemiology*, 160, 301-305.
- Hogan, P. F., Simon, C., & Warner, J. (2004). Sustaining the force in an era of transformation. In B. A. Bicksler, C. Gilroy, & J. Warner (Eds.), *The all-volunteer force: Thirty years of service* (pp. 57-89). Washington DC: Brassey's.
- Justus, A. N., Burling, T. A., & Weingardt, K. R. (2006). Client predictors of treatment retention and completion in a program for homeless veterans. *Substance Use and Misuse*, 41(5), 751-762.
- Kim, C., Nestel, G., Phillips, R. L., & Borous, M. E. (1980). *National longitudinal survey of youth labor market experience: Military studies*. Columbus, OH: Center for Human Resources Research, Ohio State University.
- Kushel, M. B., Hahn, J. A., Evans, J.L., Bangsberg, D. R., Moss, A. R. (2005). Revolving doors: Imprisonment amongst the homeless and marginally housed population. *American Journal of Public Health*, 95(10), 1747-1752.
- Laurence, J., Ramsberger, P. F., & Gribben, M. (1989). *Effects of military experience on the post-service lives of low-aptitude recruits: Project 100,000 and the ASVAB misnorming*. Alexandria, VA: Human Resources Research Organization.
- Mansur, E., Quigley, J., Raphael, S., & Smolensky, E. (2002). Examining policies to reduce homelessness using a general equilibrium model of the housing market. *Journal of Urban Economics*, 52, 316-340.
- Mares, A., & Rosenheck, R. (2004). Perceived relationship between military service and homelessness among homeless veterans with mental illness. *The Journal of Nervous and Mental Disease*, 192(10), 715-719.
- McNutt L., Wu, C., Xue, X., & Hafner, J. P. (2003). Estimating the relative risk in cohort studies and clinical trials of common outcomes. *American Journal of Epidemiology*, 157(10), 940-943.
- Nyamathi, A., Sands, H., Pattatucci-Aragon, A., Berg, J., Leake, B., Hahn, J. E., & Morisky, D. (2004). Perception of health status by homeless U. S. veterans. *Family and Community Health*, 27(1), 65-74.
- Quigley, J. M., & Raphael, S. (2000). *The economics of homelessness: The evidence from North America*. Working Paper Series. Working No. W00-003. Berkeley: University of California, Program on Housing and Urban Policy.
- O'Flaherty, B. (1996). *Making room: The economics of homelessness*. Cambridge: Harvard University Press.
- Polich, J. M. (1981). Epidemiology of alcohol abuse in military and civilian populations. *American Journal of Public Health*, 71(10), 1125-1131.
- Robertson, M. (1987). Homeless veterans: An emerging problem? In R. D. Bingham, R. E. Green, & S. B. White (Eds.), *The homeless in contemporary society* (pp. 64-81). Beverly Hills, CA: Sage.
- Rosenheck, R., Frisman, L., & Chung, A. (1994). The proportion of veterans among homeless men. *American Journal of Public Health*, 84, 466-469.
- Rosenheck, R., Gallup, P. & Leda, C. (1991). Vietnam era and Vietnam cohort veterans among the homeless. *American Journal of Public Health*, 81(5), 643-646.
- Rosenheck, R., Leda, C. A., Frisman, L. K., Lam, J., & Chung, A. (1996). Homeless veterans. In J. Baumel (Ed.), *Homelessness in America* (pp. 97-108). Phoenix: Oryx Press.
- Rosenheck R., & Koegel, P. (1993). Characteristics of veterans and nonveterans in three samples of homeless men. *Hospital and Community Psychiatry*, 44, 858-863.
- Shinn, M. (2007). International homelessness: Policy, socio-cultural, and individual perspectives. *Journal of Social Issues*, 63(3), 657-677.
- Shinn, M., & Weitzman, B. (1996). Homeless families are different. In J. Baumel (Ed.), *Homelessness in America* (pp. 109-122). Phoenix: Oryx Press.
- Small, M. (1999). The domestic course of the war. In J. W. Chambers II (Ed.), *The Oxford companion to American military history* (pp. 763-765). New York: Oxford UP.
- Tessler, R., Rosenheck, R., & Gamache, G. (2003). Homeless veterans of the all-volunteer force: A social selection perspective. *Armed Forces and Society*, 29(4), 509-524.
- Travis, J., Solomon, A. L., Waul, M. (2001). *From prison to home: Dimensions and consequences of prisoner reentry*. Washington, DC: Urban Institute Press, 2001
- U.S. Census Bureau. (2008). *Response rate and reasons for noninterviews (in percent)*. Retrieved May 30, 2008, from http://www.census.gov/acs/www/acs-php/quality_measures_response_2006.php

- U.S. Department of Defense, Office of the Secretary. (1990). *Population representation in the military service: Fiscal year 1989*. Washington, DC: U.S. Department of Defense.
- U.S. Department of Housing and Urban Development. (2005). *Affordable housing needs: A report to Congress on the significant need for housing*. Retrieved April 14, 2009, from <http://www.huduser.org/Publications/pdf/AffHsgNeeds.pdf>
- Zou, G. (2004). A modified Poisson regression approach to prospective studies with binary data. *American Journal of Epidemiology*, 159(7), 702-706.

RESIDENTIAL SATISFACTION OF MILITARY HOUSEHOLDS IN PRIVATIZED APARTMENT COMMUNITIES

Katie E. Parks, Andrew T. Carswell, and Russell N. James III

Abstract

The academic community has not extensively researched residential satisfaction of military households possibly because of the uniformity of housing options offered within a military base environment. The recent passage of the Military Housing Privatization Initiative (MHPI) is the latest in a series of Congressional initiatives to improve housing options for the U.S. armed forces. Improvements in job performance and enlistment retention are listed as potential positive spillover effects. With the passage of MHPI, families of soldiers, particularly junior officers, experience more freedom in gaining access to market rental housing. This research examines the results from a widespread survey administered by one of the military branches. The overall survey results indicate that military personnel living in privatized housing communities did not have a higher overall satisfaction compared to those living in non-privatized housing. An analysis of military households' reactions toward residential environment characteristics showed that these households differ somewhat from traditional households. One characteristic, quality of property management staff, was found to be a significant driver of residential satisfaction among military families, consistent with previous findings in other renter populations. The paper concludes with possible reasons for these differences in terms of drivers of residential satisfaction.

Introduction

In 1996, Congress enacted the Military Housing Privatization Initiative (MHPI). This legislation gave the Department of Defense (DOD) increased authority to enter joint ventures with private developers in order to address military housing quality issues (Office of the Deputy Under Secretary of Defense Installations and Environment, 2007). Through MHPI, the military intends not

Katie Parks is an M.S. Graduate, Andrew Carswell is Assistant Professor, and Russell James is Assistant Professor, Department of Housing and Consumer Economics, University of Georgia, Athens, GA.

only to improve housing quality, but, also, to have positive spillover effects as well. To the extent that military housing quality is a significant factor in the military quality of life, an improvement can result in increased morale (satisfaction), better personnel retention (re-enlistment), and, consequently, improved readiness (Office of the Deputy Under Secretary of Defense Installations and Environment, 2009). As a side benefit, the program is intended to contain DOD expenditures. All of these positive externalities have been cited as top priorities for the military (Vest, 2000). Research has also shown that policies which aid in supporting families help to increase these positive externalities (Bourg & Segal, 1999). Currently, little is known about the residential satisfaction levels of military families in privatized housing. Paulus, Nager, and Larey (1996) reported on the housing satisfaction of Army families; however, their research was completed before the MHPI took effect. Thus, to date, no academic research has been published on the residential satisfaction outcomes of the MHPI.

This article attempts to fill the knowledge gap by analyzing the residential satisfaction of junior enlisted members and their families. This group is particularly important for the MHPI, because this is predominantly who lives in the privatized communities. Data from one military branch's Residential Satisfaction Survey and the American Community Survey were used to compare the residential satisfaction of military personnel living in privatized housing to those living in non-privatized, base housing. This study also looks at whether the type of community the base offers (i.e., privatized or non-privatized) is a determinant of its personnel's satisfaction. The analysis controls for past factors that have been shown to be determinants of residential satisfaction, such as homeownership, income, and other residential and community features. In addition, the property managers of these housing communities were surveyed to gauge whether any differences existed between their perceptions of the residential satisfaction within these communities and the actual satisfaction survey results from the military families themselves.

Background

Prior to World War II, the majority of enlisted military personnel were housed in barracks or aboard ships while their families lived in the cities close to the ports or posts where they were stationed. Conversely, officers' families were

expected to live together, and were provided military housing. After World War II, the government attempted to privatize military family housing in response to a large housing shortage. Congress passed the Wherry (1949) and Capehart (1955) housing programs to initiate the privatization of military family housing. However, both of these programs excluded junior enlisted members. These programs were eventually eliminated due to high cost (Morris & Winter, 1975; Twiss & Martin, 1999). In 1979, the military entered into an agreement with the Department of Housing and Urban Development (HUD) to set aside low-income housing for military personnel, including junior enlisted members (Herschfield, 1985; Twiss & Martin, 1999). While the Section 236 program was a success in providing military families much needed housing, it came under scrutiny for giving special preference to the military, while lower-income non-military households were left on waiting lists. Arguments between DOD and HUD officials over providing affordable military family housing continued through the early 1980s (Twiss & Martin, 1999). During the 1980s, the DOD again experimented with privatized military family housing using its Sections 801 and 802 programs. These particular programs were initiated to authorize construction of family housing on those areas that were considered to have a deficit in such housing either on base or within the surrounding community for an extended period of time. Both programs were eventually eliminated due to cost concerns (Morrison, 2005; Twiss & Martin, 1999).

In addition to the issue of a housing shortage for enlisted personnel, there has often been a concern over the lack of quality in military residential units. During the early 1990s, a DOD study found that 60% of the 300,000 units owned by the military were in need of repair, with 38% requiring either major improvements or entire replacement. In addition, 65% of junior enlisted members lived in unaffordable, inadequate private sector housing (Feorgionne, 2001; Office of the Deputy Under Secretary of Defense Installations and Environment, 2007; The Air Force Center for Environmental Excellence, 2007; Vest, 2000). Military personnel and their families often cited a lack of affordable housing choice and poorly maintained housing units as major factors in their decisions not to re-enlist (Office of the Deputy Under Secretary of Defense Installations and Environment, 2007; Twiss & Martin, 1999). In 1996, Congress incorporated the MHPI into the 1996 National Defense

Authorization Act. This was an effort to both renovate and repair existing DOD-owned units and to create new housing opportunities for the junior enlisted members. The emphasis on junior enlisted members was justified in part because this is a group which has been particularly vulnerable to the stresses of military life (Burrell, Adams, Durand, & Castro, 2006). This act gave the DOD the authority to enter into joint ventures with the private sector to renovate, repair, construct and manage military family housing. The MHPI authorized several approaches to encouraging private development including direct loans, loan guarantees, rental occupancy guarantees, conveyance or lease of existing properties and facilities, differential payments to supplement service members' housing allowances, and investments (Office of the Deputy Under Secretary of Defense Installations and Environment, 2007; Vest, 2000).

Under the MHPI, all units and rents are based upon a formula called the Basic Allowance for Housing (BAH). A military family's BAH is determined based on one's rank or pay grade, as well as the area of the country in which the serviceman or servicewoman is stationed and whether or not there are dependents within the family. The rent is capped at the BAH for the designated pay grade reduced by 110% of the average utility charges. Rents and unit quality increase with the pay grade of the individual. So, while the pay grade of an individual might increase, the rent increases as well. The question as to whether the MHPI has resulted in positive changes to military personnel's residential satisfaction remains unaddressed.

Literature Review

Past literature has defined residential satisfaction as the pleasure one receives from living in a specific place. It is often conceptualized as the difference between the situation a person is experiencing and what he or she desires (Francescato, 1998; Francescato, 2002; Lu, 1999; Shelton, Gruber, & Godwin, 1983). Residential satisfaction encompasses more than the physical components of an individual's dwelling unit; it includes individuals' attitudes toward their residential environments as well. This residential environment includes the home, the neighborhood, the neighbors, and, for those who rent, the property managers (Francescato, 1998; Francescato, 2002; Lu, 1999; Shelton, et al., 1983). How a person perceives the residential environment

shapes overall satisfaction for that individual. Other factors affecting residential environment include cognitive behavior, personal and demographic characteristics, and objective and subjective attributes of the environment (Francescato, 1998; Shelton, et al., 1983).

Kahana, Lovegreen, Kahana, and Kahana (2003) stated that the congruence of personal preferences and environmental characteristics (P-E Fit) form residential satisfaction. An individual's personal preferences are contingent upon his or her personal characteristics, which include demographic, economic and social characteristics. The PE-Fit incorporates the individual's personal preferences (P) and environmental characteristics (E), both of which include physical domain, amenities, safety, and security. These functions all come together to form the individual's residential satisfaction. Figure 1 gives an overview of the model developed by Kahana, et al. (2003) showing how residential satisfaction develops using the PE-Fit theoretical model.

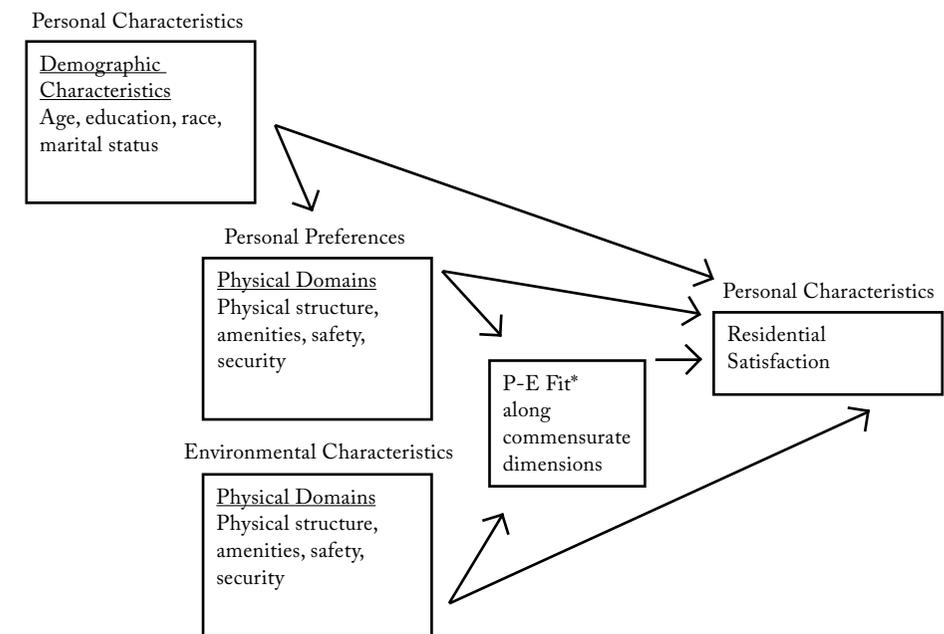


Figure 1. Influence of Person, Environment, and Personal-Environment Fit on Residential Satisfaction

*Note: P-E Fit is congruence of personal preferences and environmental characteristics
Source: Kahana, et al., 2003

While the majority of empirical studies have recognized that residential satisfaction is multidimensional, they offer different arguments as to what makes up the objective function of residential satisfaction (Francescato, 2002; Lu, 1999; Paulus, et al., 1996; Shelton, et al., 1983). Morris and Winter (1975) theorized that households base their satisfaction on both their household and societal norms, which include such things as space, tenure, structure type, quality, neighborhood, and expenditure norms. Household and societal norms do not necessarily coincide. For example, while owning a single-family detached home is the societal norm, some households may favor renting in multifamily dwellings except in cases where the shift downward in tenure is due to financial constraints placed upon the household. When this clash between the actual housing and the household norms takes place, there is a housing deficit, which decreases residential satisfaction. Households will then either migrate or adapt in order to increase their satisfaction. While previous studies of residential satisfaction have found this concept to be relevant (Baillie, 1990; Bruin & Cook, 1997; Cook, Bruin, & Laux, 1994; Lu, 1999), it might not affect the military personnel's satisfaction in the same way as the general population.

The majority of empirical studies have found similar objective determinants of residential satisfaction. These determinants include income, tenure, life cycle, house size, neighborhoods, urban or rural geography, and housing quality (Durband & Eckart, 1973; Francescato, 2002; Howell & Frese, 1983; Lu, 1999; McAuley & Nutty, 1985; Theodori, 2001). Past research on the psychological determinants of residential satisfaction have found the degree of choice among housing and a comparison with prior housing and friends' housing affect one's overall residential satisfaction (Michelson, 1980; Paulus, et al. 1996; Rapoport, 1985; Taylor & Brower, 1985; Tognoli, 1987). In addition, a person's satisfaction with his or her community has been associated with occupation (Bradburn, 1969), gender (Filkins, Allen, & Cordes, 2000; Schulze, Artis, & Beegle, 1963), and educational background (Bradburn, 1969; Campbell, Converse, & Rodgers, 1975; Filkins, et al., 2000). Examining multifamily environments, James, Carswell, and Sweaney (2009) found office staff, maintenance, noise, safety, parking, building, and landscaping significantly related to tenants' overall satisfaction rating. One study by Paris and Kangari (2005) suggests that the management staff, housing rules, improvement in

the units, and quality of the units all influence the residential satisfaction of individuals in affordable multifamily housing. James (2007) found that separated space and the residents' control over their living environments led to higher residential satisfaction.

Many studies have performed an analysis of the determinants of residential satisfaction for a specific population, such as single-parent families (Bruin & Cook, 1997), urban black adults (Jagun, Brown, Milburn, & Gary, 1990), residents in gated communities (Carvalho, George, & Anthony, 1997), and residents in rural communities (Vrbka & Combs, 1993). Other studies have performed analyses on wider population groups within certain states. For example, McAuley and Nutty (1985) looked at the residential satisfaction and mobility decisions of Pennsylvania residents. Few studies have used a nationwide sample to analyze the determinants of residential satisfaction of the population; exceptions include Lu (1999) and James (2007), who both used the American Housing Survey.

Examining the residential satisfaction of military personnel and their families introduces unique circumstances not found in other households. Such factors include combat deployments, assignment (rather than selection) of housing, and increased national and international mobility due to changing assignments (Cozza, Chun, & Polo, 2005; Maguen & Litz, 2006; Paulus, et al, 1996; Tucker, Sinclair, & Thomas, 2005; Weber, 2005). These environmental factors could alter the way service members and their families view their surroundings, making past literature on residential satisfaction less relevant for this population. Those who join the military might have different household norms than those who are not in the military. Therefore, the factors that affect the general population could have different effects on those in the military. For instance, while homeownership is the norm for a majority of the general American population, it may not be for those in the military, due to the increased transience. Thus, while those in the general population who own a home have increased satisfaction relative to those who do not, this norm might not be the case for the military population. Rossi (1955) states that the household derives its satisfaction based on its life cycle. Changes in the life cycle can generate a need for different space and prestige requirements; if these requirements are not met, the individual or family becomes dissatisfied with the current housing

conditions. According to this theory, the household migrates in order to meet these housing needs and in turn have higher satisfaction. Those in the military are forced to move to higher quality units once they achieve a certain higher ranking due to prestige. This move to a higher quality unit may not have the same effect on the residential satisfaction of those in the military, relative to those who are not, due to its involuntary nature. The possibility that enlisted military personnel could have different norms or reactions to changes in the norms illustrates the importance of looking at the residential satisfaction of this population separately.

Paulus, et al. (1996) found perceived choice and surrounding environmental quality to be key determinants in the level of reported housing satisfaction. Morale of both military personnel and their families becomes important when analyzing residential satisfaction (Paulus, et al., 1996). Both military personnel and their families have issues that influence their housing situations that differ from civilians. Military personnel face stressors that the average American citizens do not have to endure, including the stress of war zone deployment (Maguen & Litz, 2006; Tucker, et al., 2005). Due to the nature of their work, many enlisted personnel spend a majority of their time away from their families, sometimes causing marital discord (Paulus, et al., 1996; Tucker, et al., 2005). The amount of their workload, interpersonal conflict, distance from family, and limited income can all lower the well-being of enlisted personnel. Other factors affecting military families include the potential for the enlisted member to become hurt or killed. These factors can have negative effects on the emotional well-being of the family, and could potentially cause families to look at their surroundings differently (Cozza, et al., 2005).

Methodology

Given the need for information on the residential satisfaction of military personnel, the following research questions were addressed in this study:

- How does the residential satisfaction of military personnel living in MHPI units compare to the residential satisfaction of military personnel living in units not included in the privatization program?
- How do civilian community determinants of residential satisfaction differ from military community determinants of residential satisfaction?

In asking these research questions, we attempt to build off of the research of Paulus, et al. (1996), James (2007), and James, et al. (2009). Paulus, et al. (1996) largely observed different housing quality and the well-being of military housing residents among different types of off-base housing. This research, however, occurred before the implementation of MHPI and thus was notable to incorporate a difference in residential satisfaction due to a change from on-base management to privatized housing. James (2007) and James, et al. (2009) more closely examined the types of community, residential and management-related factors that most appeal to multifamily residents. This particular research has not extended to the military housing community, however.

The first data set used in this study is the REACT survey. The REACT survey was conducted by one of the four military branches in 2005 and 2006, in order to measure the residential satisfaction of military personnel. In order to develop the REACT survey instrument, the military branch received input from real estate experts, residents, property managers and property management firms, statisticians, national research analysts and opinion survey specialists. To collect the data, the military branch mailed questionnaires and comment sheets to all non-privatized housing residents as well as the residents of four privatized housing developments. In addition, privatized community owners conducted resident surveys. In all, 54 bases from the 48 contiguous states participated in the survey with a return rate of 19.1% (n=7,592) for the residents and 66.7% (n=36) for the housing managers. These data allow for a comparison of the residential satisfaction of military personnel living in both privatized and non-privatized housing at the aggregate level. In the following analyses, each separate base represents a single observation with values set at the mean values as reported by the REACT survey.

Data from the American Community Survey (ACS) were also used in this research effort. The ACS is collected by the U.S. Census Bureau every year from every county in the United States, with a total of around 3 million households surveyed (American Community Survey, 2007). The most recent survey available is from 2006, and contains county demographic information on social, housing, economic and demographic characteristics. This study combines county level demographic data with the residential satisfaction data, in order to control for outside factors.

The dependent variable was the mean value for each military base's response to the question, "Please indicate how much you agree or disagree with the following statement: I would recommend this community to others." This recommendation was used as a proxy for overall satisfaction measure, and was included within the REACT questionnaire. Using a dataset of ratings from apartment residents James, et al. (2009) showed a strong correlation between the resident's reporting of overall satisfaction and whether he or she would recommend the apartment community to a friend. This outcome variable was constructed out of responses to the above survey question, which were rated on a scale from "0" to "5," with "5" being the highest degree of agreement and "0" being the lowest degree of agreement. In order to make the study comparable with other internal military surveys, the administrators of the REACT survey multiplied this score by twenty in order to project to a scale of 0 to 100. Finally, the REACT administrators classified the scoring ranges with the descriptive labels shown in Table 1, along with the number of bases in each scoring category.

Table 1. Recommendation Scores and Categories by Base

Scoring Category	Category Description	Number of Bases
0-54	Crisis	1
55-59	Very Poor	5
60-64	Poor	10
65-69	Below Average	15
70-74	Average	10
75-79	Good	11
80-84	Very Good	1
85-100	Outstanding	2

The independent variables were divided into community type, environmental, demographic, economic, housing, and social characteristics. The community type variables allowed a comparison of the military personnel's privatized status versus those in non-privatized communities. The environmental characteristics probed residents' satisfaction with various residential characteristics, such as landscaping, office staff, maintenance, safety, parking, and unit quality. Demographic characteristics included age,

race, and total housing units. The age variable was constructed from the median household age in each county. The intent was to capture any life cycle tendencies in the counties which may influence the decision of military personnel to live off base (Howell & Frese, 1983; Lu, 1999; McAuley & Nutty, 1985; Paulus, et al., 1996). The race variable reflects the percentage of the population in each racial category. This race variable helps control for the effects of diversity on residential satisfaction (Lu, 1999; Paulus, et al., 1996). Percentage of population in the armed forces, family income and families below poverty level are included in the model as economic characteristics. The percentage of population in the armed forces also helps control for norms associated with having similar types of people living nearby.

Income has been associated with a higher residential satisfaction among individuals. In communities where higher incomes are more common, finding affordable housing may be more difficult for military personnel. The income variable is constructed from the per capita income of each community. In addition, the percentage of families below poverty level may reflect the probable presence of affordable housing in the area surrounding the bases (Howell & Frese, 1983; Lu, 1999; McAuley & Nutty, 1985; Paulus et al, 1996). Housing tenure and affordability of owning and renting housing are included in the model as housing characteristics. Past research has shown that homeownership has a positive effect on the residential satisfaction of respondents (Lu, 1999). While this particular sample did not include any homeowners, the presence of a high homeownership rate can affect the norms associated with the community in which the bases are located. The affordability of owning and renting can help determine whether the military branch is choosing places with low affordability to become privatized. If this is the case, the results could be biased, in that personnel living in privatized units have lower residential satisfaction than those living in non-privatized units due to lack of choice (Paulus, et al., 1996). Percentage of family households is included in the model as social characteristics. This factor has been shown to be a determinant of residential satisfaction in past studies (Howell & Frese, 1983; Lu, 1999; McAuley & Nutty, 1985; Paulus, et al., 1996). In addition, the percentage of veterans living in the community is included in that it may affect the community attitude toward military personnel.

An analysis of variance (ANOVA) test analyzed the total variation, the variation within the sample, and the variation between the samples. The variations measured were the residential satisfaction levels from military personnel living in privatized units versus military personnel living outside privatized units. This model does not show if the type of community is a determinant of residential satisfaction, but will show if there are differences between the types of communities on residential satisfaction. The second set of models are a series of Ordinary Least Squares (OLS) models. The first OLS regression controlled for community environmental factors in the following model:

$Recommend = \beta_0 + \beta_1 Community + \beta_2 landscape + \beta_3 officestaff + \beta_4 maintenace + \beta_5 safety + \beta_6 parking + \beta_7 unitquality + \epsilon$
 where community is a dummy variable and equals “1” if the community is privatized and “0” if the community is non-privatized.

The second OLS regression controlled for both community environmental factors and personal factors in the following model:

$Recommend = \beta_0 + \beta_1 Community + \beta_2 landscape + \beta_3 officestaff + \beta_4 maintenace + \beta_5 safety + \beta_6 parking + \beta_7 unitquality + D_i + E_i + S_i + H_i + \epsilon$
 where D_i is a vector for all the demographic characteristics, E_i is a vector for all the economic characteristics, S_i is a vector for all the social characteristics, and H_i is a vector for all the housing characteristics.

Results

A t-test was performed on all the variables to test for a significant difference between the means. Table 2 presents the means, standard deviations, and *p*-values for privatized and non-privatized communities. Contrary to expectations, the initial t-test showed that non-privatized communities had a significantly overall higher level of satisfaction (70.04 versus 63.57; *p* = .01), as measured by residents’ willingness to recommend the community to others. Surprisingly, privatized communities had lower scores for all of the community characteristics, including landscaping, safety, parking, maintenance, office staff, and unit quality. These lower scores were significantly different from non-privatized communities for the characteristics of landscaping, safety, parking, and unit quality. Counties that contained privatized communities had a smaller Hispanic population than non-privatized communities. (This

suggests the potential for a county-level confounding variable and thus, in later analysis, controls for county ethnic composition are included.) Privatized housing counties also had a significantly lower armed force population, a significantly higher per capita income, and a significantly lower percentage of the family populations below poverty.

Table 2. Descriptive Statistics of Privatized and Non-privatized Communities

Variable	Private N=7		Non-Private N=47		P-Value
	Mean	Std. Deviation	Mean	Std. Deviation	
Residential Satisfaction Scores					
Recommend***	63.57	4.237	70.04	8.902	0.0065
Landscaping***	62.43	3.408	68.06	8.881	0.0042
Safety***	78.57	4.649	85	5.141	0.0026
Parking***	63.43	5.74	70	7.647	0.0086
Maintenance	77.57	3.599	79.64	5.772	0.1128
Office Staff	70.43	5.711	71.83	6.555	0.3491
Unit Quality***	62	3.6	68.89	6.304	0.0038
ACS Community Statistics					
Age	33.56	3.554	34.65	2.891	0.6316
Total Housing Units	244062	298180	237524	527481	0.9853
Armed Forces**	1.30%	1.062	2.67%	2.483	0.0136
Income*	\$25,700	5304	\$22,255	4944	0.0936
Families Below Poverty*	7.50%	3.772	10.90%	3.962	0.0563
Renters	12.00%	3.346	13.15%	3.108	0.6441
Renter Affordability	14.51%	1.2278	4.31%	1.705	0.8867
Owner Affordability	4.20%	1.814	14.04%	2.757	4171
Family Households	70.22%	5.677	66.20%	24.273	0.4399
Veterans	10.12%	2.837	11.39%	4.542	0.2529
ACS Race/Ethnicity					
White	80.08%	13.689	71.75%	18.633	0.3278
Black	14.62%	13.33	13.60%	16.275	0.0418
American Indian***	0.32%	0.203	1.45%	1.985	0.0007
Asian	3.30%	2.996	2.61%	2.742	0.6467
Hispanic**	7.71%	8.7	18.75%	24.35	0.0168

Note. ***significant at .01 level, **significant at .05 level, *significant at .10 level.

Table 3 shows the results for the ANOVA testing on the differences between the types of communities on residential satisfaction. The recommendation score means of privatized communities and non-privatized communities were significantly different ($p = .10$). Thus, privatized communities have a significantly lower mean recommendation score than non-privatized communities. Similar to the t-test results, these results do not coincide with the belief that privatized communities would have a higher overall satisfaction.

Table 3. Analysis of Variance for Type of Community and Recommendation Score

Source	Sum of Squares	F	Means Square	P-Value
Between	1	3.53	255.13	.0657
Within	52	–	72.19	–

Table 4 shows the OLS results for the effects of community type on recommendation level, while controlling only for environmental characteristics. The results show that living in privatized versus non-privatized units had no significant effect on the recommendation score of the residents when controlling for environmental characteristics. As predicted, landscaping was found to have a significantly positive relationship with the recommendation score of residents ($p = .01$). In addition, the results showed office staff to have a significantly positive relationship with the recommendation score of residents ($p = .01$). Furthermore, there was a positive relationship between unit quality and overall satisfaction, which was significant, $p = .05$. Contrary to our hypothesis, safety, parking, and maintenance were shown to have no significant relationship with the recommendation score.

Table 4. Ordinary Least Squares Regression on Recommendation Level (with controls for Environmental Characteristics) N=54

Variable	Coefficient	P-Value	Standard Error
Privatized	.0263	.9860	8.2654
Landscaping	.3297***	.0001	.0696
Safety	.2044	.1333	.1338
Parking	.0977	.1792	.0717
Maintenance	.1167	.3350	.1198
Office Staff	.4838***	.0002	.1195
Unit Quality	.2559**	.0107	.0962

Note. $R^2 = .87$, ***significant at .01 level, **significant at .05 level, *significant at .10 level.

Table 5 shows the OLS results for the effects of community type on recommendation level, while controlling for community and county characteristics. The results show, once again, that living in privatized versus non-privatized communities has no significant relationship on the base's recommendation score. In addition, landscaping, office staff, and unit quality were all significantly positively related to the base's recommendation score, with office staff significant, $p = .01$. Once again, safety, parking, and maintenance do not significantly relate to the base's recommendation score. None of the demographic, economic, housing or social characteristics had a significant relationship with the base's recommendation score, which was unexpected.

Table 5. Ordinary Least Squares Regression on Recommendation Level (with controls for Environmental and County Characteristics) N=54

Variable	Coefficient	P-Value	Standard Error
Privatized	-1.1598	.5815	2.0820
Landscaping	.2641***	.0039	.0848
Safety	.2184	.1345	.1421
Parking	.0257	.7689	.0868
Maintenance	.0891	.5546	.1491
Office Staff	.5628***	.0004	.1426
Unit Quality	.3145**	.0120	.1178
White	1.8708	.7818	6.60727
Black	3.1617	.6449	6.7931
American Indian	3.5734	.9180	34.4421
Asian	5.8351	.8603	32.8872
Hispanic	3.6621	.2377	3.0418
Age	.1484	.4990	.2169
Total Housing Units	.0000	.4198	.0000
Armed Forces	17.7814	.6566	39.6132
Income	.0000	.6465	.0000
Fam. Below Poverty	-23.6239	.2635	20.7453
Renters	-23.0731	.5231	35.7197
Renter Affordability	7.1996	.9197	70.8016
Owner Affordability	-25.1664	.4793	35.7197
Family Households	.9843	.6686	2.2779
Veterans	-19.4453	.3216	19.3039

Note. $R^2 = .87$, ***significant at .01 level, **significant at .05 level, *significant at .10 level.

Summary, Conclusions, and Discussion

The overall results of the study indicate that military personnel living in privatized housing communities did not have higher overall satisfaction compared to those living in non-privatized housing. The descriptive results showed those living in non-privatized housing actually had a higher overall satisfaction level. This finding was similar to the Paulus, et al. (1996) study that found no difference in residential satisfaction based on place of residence as they had hypothesized. These findings could suggest that the DOD efforts in improving military housing through privatization are not showing progress presently.

While environmental characteristics were expected to have a positive relationship with resident satisfaction, the overall results were mixed. The finding related to office staff is similar to that of James, et al. (2009). Similar to earlier research on the civilian renter populations, these findings indicate that military residents are similar to civilian residents in the importance of office staff, landscape, and unit quality to their overall satisfaction. Both military personnel and civilians seem to view human relationships with the community, through interactions with the office staff, as more important than physical characteristics. Military personnel relationships with their office staff were not researched in the Paulus, et al. (1996) study; thus, little was known about the importance of office staff interaction with military personnel. These results reflect the importance of property managers and their staff, and the importance of effective training and education of these service providers. Safety, maintenance, and parking had no real effects on resident's residential satisfaction, which runs counter to previous research where these factors were significantly associated with residential satisfaction. The reason for the difference between the results for military and civilian residents could stem from these populations' differences in the belief that they can take care of themselves. Military populations, for the most part, have had extensive training in how to protect themselves and others. This training could lead military residents to feel more equipped to handle safety and maintenance concerns themselves, when compared to their civilian counterparts. However, these results could also stem from both a lack of variation in the characteristics of the sample population as compared to those in the general population and a low sample number.

While an important function of the privatization of military housing is to provide a better housing option for military personnel, these initial findings suggest that this function is not necessarily being fulfilled presently. In addition, these findings suggest that in some ways military residents behave similarly to civilians in the importance of a quality relationship with their housing management staff. However, military personnel may differ from their civilian counterparts in the importance of safety and maintenance.

Because of the population's unique characteristics, a great deal of research is still needed in both the area of military residential satisfaction and the effectiveness of military privatized housing. Utilizing individual level data, unlike the community-level aggregate data used in these analyses, would strengthen the confidence of these findings. The literature would also benefit from an analysis between civilians and military personnel living in units within the same privatized communities to help determine if military personnel and civilians differ in their determinants of satisfaction.

References

- The Air Force Center for Environmental Excellence. (2007). *Military housing privatization initiative*. Retrieved July 5, 2007, from <http://www.afcee.brooks.af.mil/dc/dcp/news/>
- American Community Survey. (2007). *2006 Data users handbook: The American community survey*. Retrieved December 2, 2007 from: <http://www.census.gov/acs/www/>
- Baillie, S. T. (1990). Dwelling features as intervening variables in housing satisfaction and propensity to move. *Housing and Society*, 17(3), 1-15.
- Bourg, C., & Segal, M. W. (1999). The impact of family supportive policies and practices on organizational commitment to the army. *Armed Forces & Society*, 25(4), 633-652.
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Walter de Gruyter.
- Bruin, M. J., & Cook, C. C. (1997). Understanding constraints and residential satisfaction among low-income single-parent families. *Environment and Behavior*, 29(4), 532-553.
- Burrell, L. M., Adams, G. A., Durand, D. B., & Castro, C. A. (2006). The impact of military lifestyle demands on well-being, army, and family outcomes. *Armed Forces & Society*, 33(1), 43-58.

- Campbell, A., Converse, P. E., & Rodgers, W. L. (1975). *The quality of American life: Perceptions, evaluations, and satisfactions*. New York, NY: Russell Sage.
- Carvalho, M., George, R., & Anthony, K. (1997). Residential satisfaction in condomínios exclusivos (gated guarded neighborhoods) in Brazil. *Environment and Behavior, 29*(6), 734-768.
- Cook, C. C., Bruin, M. J., & Laux, S. (1994). Housing assistance and residential satisfaction among single parent women. *Housing and Society, 21*(2), 62-75.
- Cozza, S. J., Chun, R. S., & Polo, J. A. (2005). Military families and children during operation Iraqi Freedom. *Psychiatric Quarterly, 76*(4), 371-378.
- Durband, R., & Eckart, D. (1973). Social rank, residential effects and community satisfaction. *Social Forces, 52*(1), 74-85.
- Feorgionne, G. A. (2001). Determining the financial feasibility of privatized Military Housing Initiatives and DSS-delivered quantitative models. *Computers and Operations Research, 28*(1), 13-32.
- Filkins, R., Allen, J. C., & Cordes, S. (2000). Predicting community satisfaction among rural residents: An integrative model. *Rural Sociology, 65*(1), 72-86.
- Francescato, G. (1998). Residential satisfaction. In W. Van Vliet (Ed.), *The encyclopedia of housing* (pp.484-486). Thousand Oaks, CA: Sage.
- Francescato, G. L. (2002). Residential satisfaction research: The case for and against. In J. I. Aragonés, G. Francescato, & T. Garling (Eds.), *Residential environments: Choice, satisfaction, and behavior* (pp.17-33). Westport, CT: Bergin & Garvey.
- Herschfield, D. C. (1985). Attacking housing discrimination: Economic power of the military in desegregating off-base rental housing. *American Journal of Economics and Sociology, 44*(1), 23-28.
- Howell, F. M., & Frese W. (1983). Size of place, residential satisfaction and the life cycle: How people come to like where they live. *American Sociological Review, 48*(4), 569-580.
- Jagun, A., Brown, D. R., Milburn, N. G., & Gary, L. E. (1990). Residential satisfaction and socioeconomic and housing characteristics of urban black males. *Journal of Black Studies, 21*(1), 40-51.
- James, R. N., III. (2007). Multifamily housing characteristics and tenant satisfaction. *The Journal of Performance of Constructed Facilities, 21*(6), 472-482.

- James, R. N., III, Carswell, A. T., & Sweaney, A. L. (2009). Sources of discontent: Residential satisfaction of tenants from an internet rating site. *Environment and Behavior, 41*(1), 43-59.
- Kahana, E., Lovegreen, L., Kahana, B., & Kahana, M. (2003). Person-environment fit as influences on residential satisfaction of elders. *Environment and Behavior, 35*(3), 434-453.
- Lu, M. (1999). Determinants of residential satisfaction: Ordered logit vs. regression models. *Growth and Change, 30*(2), 264-287.
- Maguen, S., & Litz, B. T. (2006). Predictors of morale in U.S. peacekeepers. *Journal of Applied Social Psychology, 36*(4), 820-836.
- McAuley, W., & Nutty, C. (1985). Residential satisfaction, community integration, and risk across the family life cycle. *Journal of Marriage and the Family, 47*(1), 125-130.
- Michelson, W. (1980). Long and short range criteria for housing choice and environmental behavior. *Journal of Social Issues, 36*(3), 135-149.
- Morris, E. W., & Winter, M. (1975). A theory of family housing adjustment. *Journal of Marriage and the Family, 37*(1), 79-88.
- Morrison, P. D. (2005). State property tax implications for military privatized family housing program. *The Air Force Law Review, 56*(1), 261-282.
- Office of the Deputy Under Secretary of Defense Installations and Environment. (2007). *Military housing privatization initiative*. Retrieved August 1, 2007, from <http://www.acq.osd.mil/housing/mhpi.htm>
- Office of the Deputy Under Secretary of Defense Installations and Environment. (2009). *Overview: Military housing*. Retrieved May 2, 2009, from <http://www.acq.osd.mil/housing/housing101.htm>
- Paris, D.E., & Kangari, R. (2005). Multifamily affordable housing: residential satisfaction. *Journal of Performance of Constructed Facilities, 19*(2), 138-145.
- Paulus, P.B., Nager, D., & Larey, T.S. (1996). Environmental, lifestyle, and psychological factors in the health and well-being of military families. *Journal of Applied Social Psychology, 26*(23), 2053-2075.
- Rapoport, A. (1985). Thinking about home environments: A conceptual framework. In I. Altman & C. M. Werner (Eds.), *Home environments* (pp.255-280). New York, NY: Plenum.
- Rossi, P. (1955). *Why families move*. Glencoe, IL: The Free Press.
- Schulze, R., Artis, J., & Beegle, J. (1963). The measurement of community satisfaction and the decision to migrate. *Rural Sociology, 28*(3), 279-283.

- Shelton, G. G., Gruber, K. J., & Godwin, D. D. (1983). The effect of housing type on the quality of living a comparison of residents of conventional homes, mobile homes, and apartments in rural North Carolina. *The Researchers Bulletin Series*, 73(3).
- Taylor, R., & Brower, S. (1985). Home and near-home territories. In I. Altman & C. M. Werner. (Eds.), *Home environments* (pp.183-212). New York, NY: Plenum.
- Theodori, G. L. (2001). Examining the effects of community satisfaction and attachment on individual well-being. *Rural Sociology*, 66(4), 618-628.
- Tognoli, J. (1987). Residential environments. In D. Stokols and I. Altman (Eds.), *Handbook of environmental psychology* (pp.650-690). New York, NY: John Wiley & Sons.
- Tucker, J. S., Sinclair, R. R., & Thomas, J. L. (2005). The multilevel effects of occupational stressors on soldiers' well-being, organizational attachment, and readiness. *Journal of Occupational Health Psychology*, 10(3), 276-279.
- Twiss, P. C., & Martin, J. A. (1999). Conventional and military public housing for families. *Social Service Review*, 73(2), 240-260.
- Vest, Cpt. S. (2000). *Military housing privatization initiative: A guidance document for wading through the morass*. Retrieved March 3, 2006, from <http://www.afcee.brooks.af.mil/afcee.asp>
- Vrbka, S.J., & Combs, E. R. (1993). Predictors of neighborhood and community satisfactions in rural communities. *Housing and Society*, 20(1), 41-49.
- Weber, E. G. (2005). Geographic relocation frequency, resilience, and military adolescent behavior. *Military Medicine*, 170(7), 638-642.

A HOUSE IS NOT A HOME: EFFECT OF EMINENT DOMAIN ABUSE ON THE POOR, AFRICAN AMERICANS, AND THE ELDERLY

Sandra Phillips and Marion R. Sillah

Abstract

Since the mid 1950's, there has been a notable trend toward using eminent domain for private gain across the country, and numerous cases have been documented in the popular press. However, there are very few published empirical studies on the impact of eminent domain for private gain. Our study adds to this body of literature by testing the hypothesis that eminent domain for private redevelopment abuses the private property rights of society's most vulnerable citizens. The results of this study suggest that the poor, African American, and perhaps the elderly are more negatively impacted by private takings for private gain.

Purpose of Research

Over the last five decades, there has been a marked increase in the use of eminent domain for private gain across the country (Berliner, 2003). Both the U.S. and state constitutions protect the property rights of private citizens from takings without just compensation and from whimsical seizures by restricting the use of this power to confiscations for public use. However, there has been a broadening of the definition of 'public use' to 'public purpose' to facilitate redevelopment projects in many cities nationwide. Consequently, local governments have used eminent domain to increase the tax revenues as well as to create more desirable commercial and residential districts in their towns. Often it is used because a developer has promised increased employment for the locale. Eminent domain has also been used as an incentive to attract new business to an area (Bullock, 2004; Carnahan, 2002).

Sandra Phillips is Assistant Professor at Syracuse University, Syracuse, NY; Marion Sillah is Associate Professor at South Carolina State University, Orangeburg, SC.

For many years, it has been difficult to make the case against eminent domain abuse because of poor record keeping documenting the frequency of its use for private purposes. However, Dana Berliner of the Institute for Justice spent two and a half years documenting cases of takings for private gain and has compiled an extensive report of actual and pending eminent domain cases where the primary beneficiary was a private developer. In many of the cases that she uncovered, private owners were never approached about selling their properties. Rather, developers circumvented the traditional process of private negotiations to accumulate land for major developments, and instead sought out the help of local governments to acquire property cheaply through the eminent domain process. Berliner identified over 10,000 actual or threatened condemnations for private parties between 1998 and 2002. There were 91 court challenges, and private owners won 40% of these cases. Unfortunately, in most cases owners did not challenge takings because of the time and money involved (Berliner, 2003).

The properties in Ms. Berliner's report included homes, apartment buildings, farms, commercial and industrial properties. In every instance, the government was a conduit to take property from one private owner and sell, exchange or give it to another private owner under the guise of "public purpose." Some situations were clearly a blatant violation of the intent of the original law. Even when "just compensation" was paid, these takings were unfair and unjustified because owners were rarely compensated for all of the intangible benefits of property ownership that were lost (Berliner, 2003).

While eminent domain affects citizens from all walks of life, an initial survey suggests that low-income families and minorities are affected the most. To test this hypothesis, a subset of residential properties was identified from the Berliner study, and these properties were analyzed to determine the demographic profile of the owners at the time of the takings. Since no information about the owners was provided in the Berliner Study, we indirectly determined their demographic profiles by using Census data for the geographic areas where the subject properties are located. The authors wanted to explore whether the practice of taking private property for urban development and redevelopment abuses the private property rights of the most vulnerable citizens. We review the history of eminent domain and the

literature, then present and analyze the sample from Berliner's study. Policy implications are noted, and recommendations are made for future research in this important area.

History of Eminent Domain

Eminent domain is the power of the federal government, granted by the United States Constitution, to seize privately owned property for public use with 'just compensation.' Early law, however, did not require just compensation. The Magna Carta (1215) and the Massachusetts Body of Liberty (1641) required compensation for the taking of personal property, but had no explicit requirement for the seizure of land. A compensation requirement first appeared in 1777, when the constitution of Vermont mandated compensation "whenever any particular man's property is taken for the use of the public" (Rose, 2002, p.2). Similar protections appeared in the Massachusetts constitution of 1780, and the Northwest Ordinance of 1787.

The importance of property rights is captured foremost in the Constitution where the federal government's power is restricted to a list of specifically enumerated powers in Article I, Section 8. To further safeguard the rights of private property, the "taking clause" was inserted into the Fifth Amendment and reads: "nor shall private property be taken for public use, without just compensation." In 1897, the Supreme Court used the Fourteenth Amendment's "due process" clause to incorporate the Fifth Amendment's protections of private property against violations by state governments (Rose, 2002, p.2). As with other laws, eminent domain law has continued to evolve. The meanings of just compensation, public use and the extent of individuals' protections against the taking of property by governments have been periodically challenged.

Through the early 1950s, eminent domain was utilized as it was intended in the U. S. Constitution. Governments were free to seize private property for such uses as highways, roads, sewage treatment plants and other public facilities with compensation to the private owners. In 1954, the U. S. Supreme Court ruled constitutional a District of Columbia statute allowing municipalities to condemn private property to remove "slum and blight" from areas within their jurisdiction (Rose, 2002, p. 5). The Court ruled: "once the public purpose is established, the amount and character of the land to be taken

for the project and the need for a particular tract to complete the integrated plan rests in the discretion of the legislature” (Berman v. Parker, 1954). Under this provision, municipal leaders were able to reclassify property as slum and/or blight, condemn it and sell it to private developers. This practice has evolved into the abuse that we see today as a result of altering the Constitutional meaning of ‘public use’ to now mean ‘public purpose’ (Bullock, 2004).

According to Bullock, the 1954 decision hastened two major changes to eminent domain practices: 1) the definition of blight was expanded to include middle-class neighborhoods, and 2) the government could now take properties for the sole purpose of increasing the tax base. Moreover, the definition of eminent domain was further expanded to denote the positive “public benefit” that would ensue as a result of improved tax revenues (Bullock, 2004).

The U. S. Supreme Court ruled in 1984 that eminent domain could be used for any project “rationally related to a conceivable public purpose.” As a result, states and cities have stretched the definition of public use beyond recognition. Now, in the name of curing blight or promoting economic development, they routinely condemn land owned by one private party to sell (or give) it to another (Carnahan, 2002, p. 1). Typically the new owners are large businesses, such as General Motors (GM), Chrysler, Ford, The New York Times or IBM; or developers wishing to build new communities or retail districts.

In 2005, however, the Supreme Court decided to hear a case in New London, Connecticut, which sought to apply the use of eminent domain to an otherwise vibrant middle-class community. Unlike the 1954 case in which eminent domain was used to take properties of a blighted area, the Connecticut case examined the issue of taking 15 homes purely for the purpose of improving tax revenues (Bullock, 2004). In a 5-4 ruling, the U.S. Supreme Court decided that New London has a constitutional right to condemn non-blighted private property for purely economic development purposes (Feldman, 2005). This case has huge implications for the future application of eminent domain.

Review of Literature

Numerous cases of eminent domain for private gain have been documented in the popular press. But it was not until Dana Berliner published *Public Power, Private Gain* in 2003 that the magnitude of the problem

was exposed. Berliner uncovered over 10,000 cases of actual or threatened condemnations across the country. She concluded that municipalities did not keep good records of these takings, and therefore it is difficult to determine how pervasive the practice of takings for private gain really is. In her opinion, the cases she was able to uncover are a small portion of the total number of such actions.

Rose (2002) argued that in spite of having the strongest protection of private property rights in the nation, Arizona had numerous cases of eminent domain abuse. He attributed much of this abuse to the 1997 adoption of new redevelopment statutes by the Arizona State Legislature, which expanded the power of government to take private property. In 1998, for example, the local government in Mesa, Arizona, placed a thirty-acre parcel known as Site 17, in a redevelopment district. The site had been targeted for commercial development. Seventy-five percent of the properties were voluntarily sold to the city by their owners; but the other 25%, consisting of 20-25 single-family homes, was condemned under the redevelopment statutes. They were all razed, but the proposed project was never developed. Site 17 was still vacant and for sale in 2005.

In a 2004 article, Ralph Nader and Alan Hirsch made a case for the need to protect homeowners, who are typically powerless to protect themselves against governments that exercise the rights and power given to them in eminent domain legislation. A classic example is the 1981 Poletown case in Detroit, Michigan, where the homes of hundreds of owners were taken to provide a site for a new GM assembly complex. In return, GM projected the creation of 6,500 new jobs for the local economy. Poletown was a well-established community of Polish- and African-Americans. The residents brought suit to stop the taking of their homes and community, but their lawsuit was defeated when the decision was upheld in the Michigan Supreme Court. Even though GM was not required to guarantee their promise of 6,500 jobs, the prospect of lowering unemployment in the community was used as the rationale for upholding the decision to condemn the Poletown Community. According to Nader and Hirsch, this taking displaced more than 3,400 people and the GM project cost the Detroit taxpayers more than \$300,000,000 in federal, state and local subsidies (Nader & Hirsch, 2004, p. 6). In July 2004, the Michigan

Supreme Court reversed the decision. But for 23 years the Poletown case encouraged eminent domain takings for private gain, not only in Michigan but in many other states, resulting in the seizure of hundreds of properties.

A study of 207 transactions of single-family homes from a large metropolitan area during the construction of a state highway between April and October 1991 tested the hypothesis that property owners who have their real estate taken through eminent domain are victimized by the governmental process. The researchers identified 75 properties that sold through standard negotiated sales and 132 through eminent domain sales. The data set contained the physical characteristics of the houses such as number of bathrooms, fireplaces, garages, total square footage, properties' ages, views, and lot sizes. The dependent variable was the sales price of the properties. Guidry and Quang Do used a traditional hedonic pricing model to analyze the data. The results failed to prove the hypothesis, and instead it was concluded that the eminent domain sales sold for 4.7% more than homes that were sold through standard negotiated sales (Guidry & Quang Do, 1998).

However, Guidry and Quang Do did not consider the human costs of these takings, including the emotional and psychological costs of separation from the property, neighborhood, and community. In addition, property owners of eminent domain sales are usually not willing sellers, and therefore the sale is not a typical market transaction. Moreover, when these households are displaced, the homeowners are often unable to find comparable housing at the prices they receive for their condemned properties (Berliner, 2003). If property owners challenge the takings, they also incur legal costs. Many homeowners often settle out of court for less than their property might sell for in the open market because they cannot afford a legal fight and do not want to endure the lengthy court challenge to eminent domain (Berliner, 2003).

In an earlier study of urban development in Chicago, Munch (1976) concluded that public authorities generally overcompensate for or avoid taking expensive real estate, and undercompensate for low-market value property. She concluded that the more expensive the property, the more likely that the owners would mount a legal fight, so government attempts to evade the significant risk of legal action through overcompensation. Consequently, municipalities are more likely to take low-market value properties because the

owners cannot afford to challenge the takings. Esposito (1998) supported this conclusion with a theoretical analysis of the empirical observation that low-market value property owners are at a disadvantage under the just compensation mechanism. Using a basic settlement-litigation model, Esposito demonstrated that owners of high-value properties are typically more likely to sue to either keep their properties or to exact greater compensation for the takings. In contrast, owners of low-value properties are at a disadvantage in the litigation process and consequently will typically not receive just compensation for their properties (Esposito, 1998).

Berliner (2003), Rose (2002), and Nader and Hirsch (2004) report eminent domain abuse through the stories of the victims of public takings for private gain. There have also been numerous articles in the popular press and several television programs on this issue. However, there are very few published empirical studies on the impact of eminent domain for private gain. Our study adds to the body of literature by testing the hypothesis that eminent domain for private redevelopment abuses the rights of the most vulnerable citizens: the poor, the elderly and minorities.

Focus of the Study

The literature on eminent domain suggests that the practice targets owners who are less likely to mount a challenge to the seizing of their property. Although there is some evidence that minorities and the poor may be targets of eminent domain abuse, our study examines impacts rather than intention. The purpose of our study was to examine data from the Berliner report to find out who bears the burden of these private takings. Do minority communities suffer more from eminent domain than the majority community? Are individuals in low-income neighborhoods asked to sell their properties through eminent domain more often than individuals in middle or upper-income neighborhoods? Are the elderly more often displaced? We provide some insight into each of these questions and conclude that minority communities suffer a larger burden than do majority communities primarily because of the purpose(s) for which properties are taken and the greater likelihood that low-value residential properties are taken more often than high-value residential properties.

Our study is based on a subset of residential properties from the Berliner Study. For counties represented in the sample, we identified the percent of population age 65 and older, the percent Black, and the percent below the poverty level. We utilized the Munch (1976) and Esposto (1988) theoretical framework that the likelihood of a property being acquired through eminent domain is inversely related to the median value of single-family owner occupied homes. This assumption is based on the premise that as the median value of homes in a neighborhood decreases, the probability of a home in the neighborhood being labeled blighted or deteriorating increases. In this study we also conducted a secondary analysis to measure variables associated with blight. Based on this assumption the following is expected:

Table 1. Expected Signs of Independent Variables on the Dependent Variable of Median Value of Single-Family Owner-Occupied Homes

Independent Variable	Definition	Expected Sign
Percent Black	Percent population of African American and/or African ethnicity	(-)
Percent Elderly	Percent population 65 and older	(-)
Percent Poverty	Percent population living below the poverty index	(-)

Description of Data

Our data were obtained from the Berliner (2003) study, which is the only comprehensive review of eminent domain when it is used to take private property from one individual and give it to another private entity. Berliner's data were compiled from court papers, direct contact with attorneys and community members, local news articles and unpublished legal opinions, and, cover the period between January 1, 1998 and December 21, 2002. "Because there is no official data available on the use of eminent domain for private parties, there are undoubtedly many takings for private use that were not included" (p. 9). Since only 24 states collect information on the number of condemnation cases filed each year, the sample data grossly underestimates the actual number of cases filed.

Although the results represent only a small percentage of the overall practice, Berliner documented 10,282 cases filed or threatened condemnations against private parties. Of that number 3,722 represent condemnations that were filed, while 6,560 represent the threat of condemnations against private

parties for private gain. Frequently the mere threat of proceedings causes a homeowner to agree to sell his or her property.

Our goal was to ensure a consistent level of analysis monitoring at the lowest level possible across all states. Owing to data constraints, including inconsistencies in the reporting of takings in the Berliner study, information was obtained at the county level. While we realize that zip code or block data are preferred, meaningful analysis can be performed for the county level and connections, if any, between eminent domain takings and Black, elderly and low-income people can be identified.

Among the counties listed in the Berliner report, the authors selected only those counties where properties impact private homeowners. If the condemned property was a business or farm, it was not included in our analysis. Berliner's sample represents 50 states and the District of Columbia. In this sample, there are 41 states where actual or threatened condemnations occurred in this 5-year period. Of the 41 states listed in the Berliner report, 26 states have filed or have threatened condemnations that impact private homeowners only, representing 54 counties (see Appendix). From this sample, Berliner's findings were augmented with demographic data from the 2000 U.S. Census to determine the demographic profile of affected areas, focusing primarily on the percentage of condemnations filed or threatened that affected African Americans, the elderly, and individuals living in poverty.

Methodology

Two sets of analyses were performed in this study. The first was a systematic comparison of three demographic variables (African American, elderly, and poor) by city/county in which the property was located. This approach was used in order to uncover any patterns evident in the data. We analyzed the demographic variables by location relative to national norms. With this method, the authors could determine whether the elderly, poor, and African Americans were more negatively impacted by eminent domain proceedings.

The second and more rigorous analysis utilized in the study was a simple linear regression which was supplemented by a multiple regression. The key objective of the simple regression was to determine if statistical relationships existed among the dependent variable: Median Value of Single

Family Owner-occupied Homes and the independent variables Percent of Black, Percent Elderly and Percent Poverty as listed in Table 1. The multiple regression was conducted to control for blight: i.e., to determine whether there was a significant link between the areas subject to eminent domain and factors indicating inferior properties. The dependent variable is Median Value of Single Family Owner-occupied Homes and the independent variables include those listed above plus property characteristics of No Fuel Used, Lacking Plumbing, Lacking Kitchen, and Vacancy (see supplemental analysis for details). Based in part on the theoretical framework developed by Munch (1976) and Esposto (1988), three regressions were completed to test whether the age, Black, and poverty variables were significant predictors of the value of properties and therefore, a predictor of private property takings.

The argument made by Munch (1976) that public authorities generally overcompensate for or avoid taking expensive real estate, and undercompensate for low-market value property is the rationale and the underlying assumption for our study. While we do not determine the race, age and income of private owners whose properties were taken or were threatened by a taking, our research determined that properties taken or threatened by a taking, were typically situated in counties and communities that were overwhelmingly black, low income and/or had higher than average elderly residents. Further, Esposto (1998), using a basic settlement-litigation model, demonstrated that owners of high-value properties are typically more likely to sue to either keep their properties or to exact greater compensation for the takings. Esposto (1998) concluded that owners of low-value properties are at a disadvantage in the litigation process and consequently will typically not receive just compensation for their properties. Therefore, in our model we test the relationship between poor, elderly and Black variables and the median value of homes in areas where there have been takings and/or the threat of takings.

Analysis of the Data

Comparative analysis

From the systematic comparison, the demographic variables reviewed may overlap. For instance, one individual may appear in two or three categories, e.g., a Black person may also be poor and/or elderly. The national

Table 2. Regression Results of the Impact of Demographic Variables on the Median Value of Single Family Owner Occupied Homes

	Coefficient	P-Value	R-Squared
Percent Black	-979.3802	0.006	0.1354
Percent 65 and Older	-1126.127	0.541	0.0072
Percent Poverty	-3588.905	0.001	0.1936

averages for 2000 reveal that 12.4% of the population lived below the poverty level; 12.3% of the population was comprised of Blacks; and 12.4% of the population was 65 and older. The Black population figure includes those who consider themselves to be Black and one race, as well as those of mixed race who identify as Black.

An analysis of the data reveals that of the 54 counties examined, 33 counties were above the national average with respect to individuals living below the poverty level; 28 had higher than the national average of African Americans; and 29 counties had a higher than average number of elderly residents. Sixty-one percent of the counties had above average numbers of individuals living below the poverty level where condemnations or threats of condemnations were filed; African Americans were impacted in over half (52%), and the elderly experienced condemnations or threats in approximately 54% of the counties reported.

The data show that poor and African American citizens are more negatively impacted by private takings for private gain than their wealthier or white counterparts. For instance, in Canton, Mississippi, 81% of the county is African American and over one-third of the population (34.8%) live below the poverty level. Eminent domain proceedings were initiated in Canton where the beneficiary of the foreclosures was Nissan Motor Corporation. In Detroit, Michigan, where 83% of the population is African American and 26% is poor, residents on the lower east side were asked to move so that a \$92 million redevelopment plan could be launched to boost the local property tax base (Berliner, 2003).

In Riviera Beach, Florida, individuals living below poverty, African Americans and the elderly were all impacted at rates higher than national norms. Twenty-three percent of the population lives below poverty, 69% of the city's residents are African American, and 15% are elderly.

The following nine counties experienced above average impacts on Blacks, individuals 65 and older, and those living in poverty, representing 17% of all counties where eminent domain filings or threats adversely impacted all three demographic groups:

- Daytona Beach, Florida
- Riviera Beach, Florida
- Baltimore, Maryland
- Atlantic City, New Jersey
- Toledo, Ohio
- Ambridge, Pennsylvania
- Greer, South Carolina
- Lakewood, Washington
- Charleston, West Virginia

The following 11 counties experienced above average impacts on Blacks and individuals living below poverty, comprising 20% of all county filings where Black and low-income individuals were faced with threats and actual condemnations:

- Little Rock, Arkansas
- San Bernardino, California
- Bridgeport, Connecticut
- New London, Connecticut
- Chicago, Illinois
- Wyandotte, Kansas
- Detroit, Michigan
- Canton, Mississippi
- Maplewood, Missouri
- Memphis, Tennessee
- Dallas, Texas

Among the other notable findings of our study:

- Communities where poor people lived were most often the subject of private takings for private gain (61.1%).
- Homes in 68.5% of the counties listed were below the national median home value of \$119,600.
- Ohio had the largest number of counties in the data, with six counties affected by private

takings for private gain. Half of the counties had higher than average Black populations and individuals living in poverty. However, five of the six counties had higher than average percentages of elderly.

- California had five counties listed and exhibited higher than average poverty rates in four of them.
- Two counties were recorded for Pennsylvania and both counties recorded high percentages of Blacks.
- Washington recorded two counties where eminent domain was implemented against private homeowners; both counties had higher than average poverty levels and populations 65 and older.
- Tennessee reported only two counties, both with higher than average low-income residents. However, in Memphis, 62% of the population was Black.
- Baltimore, the only county listed in Maryland, had higher than the national average with respect to Blacks, 65 and older, and individuals living in poverty.
- In Connecticut, of the three counties listed, two had higher than average concentrations of Blacks and individuals living in poverty.
- In Arkansas, Little Rock was the only city listed and it had higher concentrations of Blacks and poverty.

Although the data show that all three groups were impacted more than national averages with regard to threats or filings against homeowners, poor people were more often (61%) the subject of takings, followed by the elderly (54%), and Blacks (52%). Smaller units of analysis (e.g., census tracts, zip codes) may reveal more or less impact on vulnerable populations. For instance, more targeting is found than is reported in our study in Garden Grove, California. While statistics for the city reveal a Black population of 1.8%, elderly population of 9.5%, and a poor population of 13.9% of the total, Berliner reports that the Garden Grove project “primarily displaced lower income residents and visitors [e.g., hotel guests]” (p. 29). Berliner goes on to cite that the urban renewal project destroyed a mobile home park of fixed-income senior citizens as well as the Sage Apartments, consisting of 96 units rented primarily to maids and busboys who were employees of the nearby low-cost hotels (Berliner, 2003).

In Bristol, Connecticut, although the town contains few elderly, proposed development specifically affected the Bugryns, who were in their

70s and 80s. The siblings owned two homes that they had built with their own hands and had lived in for most of their lives. Although the family appealed the condemnations, they lost their case at trial and were subsequently ordered to vacate their homes by July 2003 (Berliner, 2003).

In another example, in Nassau County, Florida, the proposed redevelopment project affected American Beach, which is one of the oldest and most historically renowned Black beaches in the country (Berliner, 2003). Statistics for the county fail to highlight the disproportionate number of Blacks impacted by the threat of condemnation and therefore underrepresent the impact on the African American population.

Simple linear regression analysis.

The regression analysis provides evidence to suggest that race, poverty and age are predictors of the probability that a home will be taken due to eminent domain. Therefore, the following conclusions can be inferred:

- Blacks are more likely than whites to have their property taken by eminent domain. The percent Black variable is a significant predictor of the median house value and they are negatively related.
- The findings for the impact of eminent domain on the elderly are inconclusive. The over 65 variable is inversely related to the median house value variable; however, it is also insignificant—possibly because of the small sample size.
- The poor are more likely to have their property taken by eminent domain. Like the trend for the percentage of Blacks, the poverty variable is significant and negatively related to the median house value variable.

While we understand that these results are not overwhelming evidence for the true effect eminent domain has on the populations studied, our analysis does provide some evidence of a connection between the demographic variables examined and the likelihood of eminent domain takings. More research is needed on this topic with a more extensive data set. Nevertheless, findings appear consistent whether they are viewed from the systematic comparison or the linear regression analysis.

Supplemental Analysis

Some may argue that those most impacted by eminent domain live in neighborhoods where blight has occurred. In order to examine this question,

the regression analysis was repeated to take into account the following variables used to measure blight: homes using no fuel, homes with incomplete kitchens and bathrooms, and homeowner vacancy rates. Results suggest that after controlling for blight, there was no significant effect on outcomes.

The results of a multiple regression reveal that although Black and individuals living in poverty remain significant at $p < .05$ (See Table 3); those 65 and over remain insignificant, $p = 0.323$. However, as expected, all three variables continue to be negatively related to median home value. The blight variables were found to be statistically insignificant and therefore fail to support a relationship with the dependent variables. In addition, a stepwise regression was performed and is presented in Table 4. Stepwise regression results are consistent with the outcomes presented in Table 3.

In summary the following trends emerge:

- Blacks and individuals living in poverty are predictors of eminent domain proceedings. Homeowners 65 and older is inconclusive and may or may not be a predictor of eminent domain proceedings.
- The relationship between Blacks, those 65 and older, individuals below the poverty level and property value remains the same (negative). However, because of the interactive effect with blight variables, age becomes more significant, while the interactive effect of Blacks and individuals below poverty level becomes less significant.
- The variables indicating blight—no fuel used, lacking complete plumbing and kitchen facilities, and homeowner vacancy rates—are not significant and therefore are not predictors of eminent domain proceedings.
- Blacks and the poor are more likely to have their property taken by eminent domain than are Whites and wealthy Americans.

Concerning the issue of blight, the authors found no significant correlation between eminent domain proceedings and variables measuring deteriorating properties. Lower value homes are not necessarily poorly maintained homes. The mere perception of blight should not be a reason for eminent domain seizures against lower value homes. It should be the right of every citizen to keep their home if they so choose. A key question is, should government be allowed to remove someone from their home who wishes to stay? And more important, who is being asked to leave? Are certain segments of the population bearing an undue burden relative to such takings?

Table 3. Multiple Regression Results of the Impact of Demographic and Blight Variables on the Median Value of Single Family Owner Occupied Homes

Predictor	Coefficient	T-Value	P-Value
Black	-840.4	-2.09	0.042
65 and older	-1533	-1.00	0.323
Poverty	-3727	-2.43	0.019
No fuel used	19856	1.61	0.114
Lacking plumbing	53382	1.53	0.133
Lacking kitchen	27648	1.24	0.220
Vacancy	-9396	-1.61	0.115

Furthermore, based on the recent Supreme Court decision in *Kelo vs New London*, the establishment of blight is not needed to take private property. What is required to take property is simply a belief that private development efforts will achieve economic revitalization in a city and may, in turn, lead to increased tax revenues.

Policy Implications

The data show that the practice of taking private property for urban development and redevelopment abuses the rights of the most vulnerable citizens. In order to reverse this trend, the original intent of the law should be strictly enforced to minimize the undue burdens inflicted upon the poor, African American and elderly citizens in our communities. Regrettably, the Supreme Court in its recent *Kelo vs New London* ruling stipulated that eminent domain, when it serves only to benefit developers and cities wanting to improve their tax base, is legally sanctioned.

This decision has accomplished two things. On the one hand, it has led to an increased level of activity by governments to seize property. For instance, hours after the *Kelo* decision, in Freeport, Texas, officials began legal filings to seize waterfront businesses for a private boat marina. In less than three weeks after the ruling, Sunset Hills, MO, voted to condemn 85 homes and small businesses to make way for a shopping center and office complex, and in Oakland, California, a week after the Supreme Court's ruling, officials used eminent domain to evict a downtown tire shop owner in favor of a housing development (Congressional Quarterly, 2005). Freeport and Oakland have a

Table 4. Step-wise Regression Results

Step	1	2	3	4
Black	-840	-866	-896	-738
T-Value	-2.09	-2.16	-2.23	-1.87
P-Value	0.042	0.036	0.030	0.068
65 and older	-1533			
T-Value	-1.00			
P-Value	0.323			
Individual below poverty level	-3727	-3684	-3441	-4719
T-Value	-2.43	-2.40	-2.25	-3.58
P-Value	0.019	0.020	0.029	0.001
No fuel used	19856	17130	19675	21041
T-Value	1.61	1.42	1.66	1.75
P-Value	0.114	0.161	0.104	0.087
Lacking complete plumbing facilities	53382	63535	77789	79377
T-Value	1.53	1.90	2.49	2.50
P-Value	0.133	0.063	0.016	0.016
Lacking complete kitchen facilities	27648	26337		
T-Value	1.24	1.19		
P-Value	0.220	0.242		
Homeowner vacancy rate	-9396	-9801	-9260	
T-Value	-1.61	-1.68	-1.58	
P-Value	0.115	0.100	0.120	

greater than the national average percent of Blacks (13.9% and 37.6%) and individuals living below poverty (22.9% and 19.4%); in Sunset Hills, only 1.3% of the population is Black and 3.1% live in poverty, but the city possesses a higher than national average percentage of elderly at 25.2%. The impact on those most vulnerable is evident.

On the other hand, the ruling has encouraged others to mobilize to ensure that eminent domain abuse is curtailed. Immediately after the *New London* decision, the House initiated legislation to bar federal transportation and community development funds from private developers seeking to take private properties by eminent domain (Holland, 2005). Moreover, local

leaders, such as those in New Hampshire, have passed legislation to limit government's ability to seize private property for private development ("News Service," 2006). It remains to be seen whether those hoping to capitalize on the momentum of the New London verdict or those hoping to limit the use of eminent domain will prevail.

Recommendations for Future Research

The existing research has focused on the prevalence of eminent domain abuse and typically reports cases of abuse to support this position. What is absent in the body of literature is an objective measure of the cost of eminent domain abuse. In addition to identifying the groups that are most affected by this practice, there is a need to quantify the abuse in dollar terms. A longitudinal study is needed to determine the economic impact of redeveloped properties. Are the promises made by corporations and developers realized, and when? Research should examine the actual number of jobs created, the increase in tax revenues and the increase in the value of real estate developed after a taking or takings for private gain. Then a comparative analysis should be conducted to determine if the benefits outweigh the costs.

The literature suggests that many governmental officials are under pressure to create economic wealth and are eager do almost anything to attract business and industry to their cities and towns, including taking private property and selling or giving it to other private owners to develop more valuable real estate land uses. A study of the arguments made by municipalities to support takings should be made to test this theory. The study should examine how closely the promises made by corporations and developers were scrutinized before governmental officials made the decisions to take private property for redevelopment.

Another area of future research is to examine the extent to which eminent domain laws are being changed in order to eliminate or minimize the abuse of this power. The research should determine practices, abuse and legislative changes on a state-by-state basis. The Nader and Hirsch (2004) article proposes the use of the equal protection doctrine where stricter scrutiny is required because certain powerless groups are disproportionately affected in part because these groups cannot protect themselves. How many states have amended their eminent domain laws to reflect this equal protection

doctrine? Rose (2002) recommended that the state of Arizona reverse the 1997 redevelopment statutes in their entirety. These statutes allowed Arizona municipalities to take private property for almost any reason and to force any property owner off a piece of land (p. 1). Rose also recommended that the Arizona law be changed to make it easier for landowners to defend their rights. To what extent are these recommendations being implemented in state houses across the country?

Our research has focused on the impact of eminent domain for private gain on single-family homeowners, measured at a city/county level. Similar research is needed for businesses and other property types. Nader and Hirsch (2004) argue that there is a real difference between takings of business properties where the owners have significant resources to challenge the takings, and the takings of homes of powerless groups such as the elderly and most African Americans. A study of business takings and the economic impact of these takings will allow comparisons to be made to determine who carries the largest economic, emotional and personal burden of eminent domain for private gain. In addition, penetration at levels below the city/county should be examined. As evidenced in this study, there may be lower pockets of adverse impacts that are not shown at the city/county level. Different impacts may result at the zip code or street address level than were found in this study.

Finally, a study should be conducted to determine the long-term impact of private takings for private use, on the victims of these actions. Answers are needed for questions such as:

- How long does it take displaced owners to find new homes?
- How do the prices of the new homes compare to the prices received for the homes that were taken?
- When hundreds of homes are taken, do the property owners resettle or recreate their old neighborhoods? Or, are they scattered, never to become a cohesive community again?
- Do these takings benefit the victims in any way—new jobs, increased income, more valuable properties, etc.?

Community activism has drawn attention to the problem. Legislatures are becoming more sensitive to the plight of the victimized private property owners, and private owners who challenge these kinds of takings are winning

more often in the court system than in the past. However, abuse is still widespread and unfairly targets the most vulnerable citizens. Thus eminent domain activities need to be documented and analyzed more extensively in the academic literature.

References

- Berliner, D. (2003, April). *Public Power, Private Gain*. Washington, DC: Institute for Justice.
- Berman v. Parker, 348 U.S. 26 (1954).
- Bullock, S. (2004, August 16). Narrow 'public use.' *National Law Journal*, 26(48), 23.
- Carnahan, I (2002, November 25). Domain game. *Forbes*, 170(11), 112-113.
- Congressional Quarterly, Inc. (2005, September 22). Capitol Hill Hearing Testimony. House Judiciary. Testimony by Dana Berliner, Senior Attorney, Institute for Justice.
- Esposito, A.G. (1998, December). Takings, litigation and just compensation. *Atlantic Economic Journal*, 26(4), 397-412.
- Feldman, L. G. (2005, October). Domain decision. *Commercial Investment Real Estate*, 15-16.
- Guidry, K., & Quang Do, A. (1998, July). Eminent domain and just compensation for single-family homes. *Appraisal Journal*, 66(3), 231-235.
- Holland, J. L. (2005, July 1). Congress works against eminent domain ruling. *The Post Standard*, p. A-9.
- Munch, P. (1976, June). An economic analysis of eminent domain. *Journal of Political Economy*, 84(3), 473-497.
- Nader, R., & Hirsch, A. (2004). Making eminent domain humane. *Villanova Law Review*, 49, 207-232.
- News Service Reports (2006, March 23). Amendment would ban some eminent domain. *The Post Standard*, p.A-10.
- Rose, J. R. (2002, August 16). *Eminent domain abuse in Arizona: The growing threat to private property (Arizona Issue Analysis #174)*. Phoenix: Goldwater Institute, Center for Constitutional Government.

Appendix: Demographic Variables by County

		Individuals			
		Black (%)	65 And older (%)	Below poverty level (%)	Single family owner-occupied median value (\$)
NATIONAL AVERAGE		12.3	12.4	12.4	119,600
1	Tempe, Arizona	4.4	7.2	14.3	132,100
2	Little Rock, Arkansas	41.0	11.6	14.3	89,300
3	Garden Grove, California	1.8	9.5	13.9	199,700
4	Riverside, California	7.0	12.7	14.2	146,500
5	San Diego, California	8.9	10.5	14.6	233,100
6	San Bernardino, California	17.8	8.2	27.6	98,700
7	San Jose, California	4.1	8.3	8.8	394,000
8	Bridgeport, Connecticut	33.2	11.5	18.4	117,500
9	Bristol, Connecticut	3.4	11.5	6.6	129,300
10	New London, Connecticut	21.8	12.1	15.8	107,900
11	Daytona Beach, Florida	33.5	19.7	23.6	79,700
12	Jacksonville, Florida	29.7	10.3	12.2	87,800
13	Nassau, Florida-American Beach	7.9	12.6	9.1	126,700
14	Palm Beach, Florida	14.9	23.2	9.9	135,200
15	Riviera Beach, Florida	69.4	15.0	23.0	80,500
16	Chicago, Illinois	7.4	10.3	19.6	132,400
17	Des Plaines, Illinois	1.2	17.2	4.6	184,600
18	St. Joseph, Indiana-Mishawaka	12.3	13.6	10.4	85,700
19	Wyandotte, Kansas-Kansas City	29.4	11.7	16.5	54,300
20	Highland Heights, Kentucky	2.2	18.4	8.9	93,000
21	Newport, Kentucky	6.1	11.2	22.3	67,000
22	Baltimore, Maryland	65.2	13.2	22.9	69,100
23	Detroit, Michigan	82.8	10.4	26.1	63,600
24	Richfield, Minnesota	7.9	16.4	6.3	128,500
25	Canton, Mississippi	80.8	11.9	34.8	53,300
26	Brentwood, Missouri	2.2	14.4	5.5	123,600
27	Maplewood, Missouri	17.0	9.1	14.1	70,800
28	Springfield, Missouri	3.9	14.9	15.9	79,800
29	St John, Missouri	14.9	15.1	7.8	57,700
30	Sunset Hills, Missouri	1.3	25.2	3.1	217,000
31	Atlantic City, New Jersey	45.9	14.2	23.6	87,500
32	Akron, Ohio	29.7	13.5	17.5	76,500
33	Lakewood, Ohio	2.5	12.2	8.9	117,900

Appendix: Demographic Variables by County (Cont.)

		Individuals			
		Black (%)	65 And older (%)	Below poverty level (%)	Single family owner-occupied median value (\$)
<i>NATIONAL AVERAGE</i>		12.3	12.4	12.4	119,600
34	Norwood, Ohio	2.7	12.6	12.9	86,500
35	Shaker Heights, Ohio	35.4	15.6	6.9	201,600
36	Toledo, Ohio	24.8	13.1	17.9	75,300
37	Willowick, Ohio	1.0	21.9	4.5	110,000
38	Ambridge, Pennsylvania	12.6	23.0	17.8	50,300
39	Valley, Pennsylvania	26.1	12.3	5.2	116,200
40	Cranston, Rhode Island	4.2	17.3	7.3	122,500
41	Greer, South Carolina	20.0	13.6	15.8	95,800
42	Carter, Tennessee	1.2	15.0	16.9	77,300
43	Memphis, Tennessee	61.9	10.9	20.6	72,800
44	Dallas, Texas	26.5	8.6	17.8	89,800
45	Hurst, Texas	4.5	12.4	6.6	98,100
46	Rowlett, Texas	9.4	5.2	3.0	116,900
47	Ogden, Utah	2.9	11.3	16.5	101,300
48	Riverton, Utah	0.4	3.3	2.6	173,000
49	South Salt Lake City, Utah	3.6	7.6	16.3	115,100
50	Winooski, Vermont	1.9	13.5	15.2	112,500
51	Hampton, Virginia	46.1	10.3	11.3	91,100
52	Bremerton, Washington	9.4	12.5	19.4	103,500
53	Lakewood, Washington	15.0	13.2	15.8	147,600
54	Charleston, West Virginia	16.2	17.6	16.7	101,400
Number of counties above/*below national average		28	29	33	37*
% of counties above/*below national average		51.9%	53.7%	61.1%	*68.5%

Bolded values for Black, 65 and Older, and Below Poverty Level represent those above the national average.

*Bolded values for Single Family Owner-Occupied Median Value represent those below the national average.

Source: 2000 Census