

**MANUFACTURED HOUSING:
AN ASSESSMENT OF COMMUNITY ATTITUDES**

by

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Dissertation submitted to the Faculty of the

Virginia Polytechnic Institute and State University

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

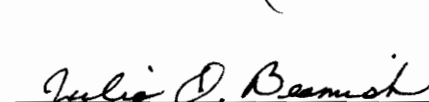
in

Housing, Interior Design, and Resource Management

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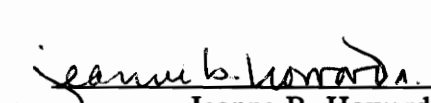
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September, 1995
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Key Words: Community Attitudes, Manufactured housing, Mobile homes, NIMBY,
Not In My Back Yard, Rural Virginia.

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(ABSTRACT)

This study examined the opinions of 552 residents of rural Virginia regarding acceptance of manufactured homes, formerly known as mobile homes, and their occupants. The purpose of this study was to determine to what extent respondents' demographic and socioeconomic characteristics, innovativeness, and perceptions of manufactured home characteristics, its occupants and neighborhood characteristics, predicted the acceptance of manufactured homes.

Data were obtained from two mail surveys distributed among eight rural counties. One survey covered single-section manufactured homes ($N = 274$) and another covered double-section manufactured homes ($N = 278$). A proposed theoretical model was adapted from M. J. Dear and S. M. Taylor's (1982) model for community attitudes toward mental health care facilities. Hypotheses were tested through multiple regression analyses.

The statistical model for the full sample included 13 independent variables. Six variables (perceived manufactured home occupant behavior, proportion of manufactured homes in the county, perceived manufactured home condition, manufactured home type, respondents' gender, and manufactured home knowledge)

emerged as significant predictors of manufactured home acceptance ($R^2 = .3541$).

Separate regression models for the single- and double-section manufactured home subsamples were evaluated. In the single-section manufactured home subsample, perceived manufactured home occupants' behavior, proportion of manufactured homes in the county, and perceived manufactured home condition were significant predictors of single-section manufactured home acceptance ($R^2 = .2522$). In the double-section manufactured home subsample, perceived manufactured home occupants' behavior, perceived manufactured home condition, respondent's manufactured home knowledge, and neighborhood physical homogeneity were significant predictors of double-section manufactured home acceptance ($R^2 = .3574$).

Results suggested respondents' socioeconomic and demographic characteristics were not important in predicting manufactured home acceptance. Instead, acceptance was mostly the result of perceptions about occupants' behavior, a finding consistent with Dear and Taylor's (1982) study about acceptance of mental health facilities. In general, double-section models were more accepted than single-section models.

ACKNOWLEDGMENTS

I wish to thank my advisor, Dr. Rosemary Goss, and the members of the dissertation committee, Dr. Michael Johnson, Dr. Julia Beamish, Dr. C. Theodore Koebel, Dr. Jeanne Howard, and Dr. Kathleen Parrott, for their understanding, encouragement and guidance throughout my doctoral studies and this dissertation. Particularly, I would like to thank them for helping me narrow down the scope of this work and for the guidance provided while I moved from Virginia to North Carolina and to Georgia.

I especially thank Dr. Goss for her willingness to take my phone calls at home, day or night, weekday or weekend; her commitment to help me and my work made this study possible. I also wish to thank the "HIDM Team": Joyce Bandy, Dove Robertson, Debbie Elkins, Sandy Graham, Dr. Goss, Dr. Beamish, Sandra Reynolds and her daughter for helping me with the tedious envelope stamping, stuffing, and folding on a beautiful Friday in April 1995. I sincerely thank Dr. Jeannette Bowker, Department Head, for making the help of the HIDM Team possible.

I would also like to acknowledge Dr. Goss and Dr. Beamish for their willingness to fund this research in concert with their HATCH-funded study, the analysis of factory-built housing as an affordable alternative in Virginia's rural communities. Their actions made this study economically feasible.

Thanks to Marilyn Cavell of the Virginia Center for Housing Research for providing the census data used in this study. Additionally, I thank Ron Dunlap of the

Virginia Manufactured Housing Association and Larry Landers of the Georgia Manufactured Housing Association for their assistance in obtaining information about legislative issues pertaining to manufactured housing. A special thanks to Dr. Michael Johnson and Al Pouransari for their assistance in running the statistical software package used for data analyses in this study. I would also like to acknowledge the continued support and encouragement provided by Dr. Gladys G. Shelton from the Housing and Consumer Economics Department at The University of Georgia. I truly cannot find enough words to thank Gladys for her friendship and the valuable professional guidance she provided to me.

Finally, my gratitude and love go to my wife Julia, our son Ricardo, and our families back home, whose encouragement and sacrifices made the completion of this work possible.

DEDICATION

I would like to dedicate this work to my wife Julia and our son Ricardo. I would also like to dedicate this dissertation to my father, Horacio, who is no longer with us and whom always asked me: "So, when are you going to finish school?" Dad, wherever you are, I finally did it!

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CHAPTER 1

INTRODUCTION

Housing affordability has received much attention from both policy makers and researchers through the years. As a general rule, government officials from the U.S. Department of Housing and Urban Development (HUD) define affordable housing as a residential unit that is available for lease or purchase to a family or individual at no more than 30% of the household's total gross income. Much of the housing available today does not meet this affordability standard. Thus many limited-income households are forced into substandard or unaffordable housing or, they become homeless.

Housing that is adequate must meet certain basic needs, be in an adequate location (in relation to commercial, educational, and health services, for example), and be available at a certain price (Morris & Winter, 1978). In view of this, housing affordability can depict household income as insufficient to cover the cost of producing adequate housing that meets today's building standards and codes.

Regardless of the definition used, the reality is that current housing costs, among other factors, seriously affect the finances of lower-income households who must spend more than 30 percent of their income on housing (Koebel, Cavell, & Morgan, 1993). As the price of housing continues to increase, many builders, government agencies, and housing advocates are looking for new methods to reduce housing costs and to continue to provide adequate housing. For example, there is a trend toward using more prefabricated parts in housing construction such as modular

sections, panelized components, and fully assembled manufactured homes (Moore & Crocker, 1991).

Manufactured housing (commonly known as mobile homes) is defined in this study as any single-family factory-built residential structure that rests on a permanent chassis, is transported fully assembled to a provisional or permanent foundation on a rented or owned site, and bears a HUD approval label for its construction.

Manufactured homes are currently one popular low-cost housing alternative, and O'Hare and O'Hare (1993) argue that during times of economic stagnation more Americans will be viewing factory-built housing as their only chance to attain homeownership. Currently, six percent of Americans live in manufactured housing. The state of Virginia ranked 33rd in the nation in the number of households living in manufactured housing in 1990 with manufactured homes representing 6.4% of all housing units in the state (O'Hare & O'Hare, 1993).

Today, manufactured housing is a relatively low-cost alternative to conventional stick-built housing that can play a major role in providing affordable, safe, and adequate single-family housing to limited-income homebuyers and tenants (O'Hare & O'Hare, 1993; White, 1992; Goss, Parrott, & Engelen-Eigles, 1992; U.S. Department of Housing and Urban Development [HUD], 1991; Collin & Cowan, 1990; Virginia Department of Housing and Community Development, 1988; Manufactured Housing Institute, 1985). The use of inexpensive housing units--such as factory-built housing and accessory apartments--is considered by some experts to be a viable way to address

housing affordability problems in the United States due to the economies of scale that characterize the "high-quantity/low-cost" production of manufactured housing (White, 1992).

Despite the affordability advantages associated with manufactured housing, many sectors of the population oppose its use. In fact, some community residents, local public officials, and builders reject manufactured housing as an acceptable option for residential use, particularly, when the manufactured home unit is to be located anywhere near them (HUD, 1991). This phenomenon is what many call the "Not In My Back Yard" [NIMBY] syndrome.

NIMBY has become a widely used term in the vocabulary of community developers, urban planners, and housing specialists. NIMBY commonly refers to the opposition to the location of specific building types, developments, or activities that are perceived as undesirable or even dangerous. Although some residents may acknowledge the need for creating more affordable housing, shelters, or landfills, the basis for rejection of these types of development is related to location. Many residents approve of these types of developments provided they are not near their homes (Stover, Cloud, Garner, Phillips & Strauss, 1994).

NIMBY actions, which are often supported by zoning or other planning laws, are exclusionary in nature because they can prevent the location of both affordable housing developments as well as noxious or hazardous facilities. Therefore, NIMBY actions have: a) served to halt and control real or perceived dangerous and hazardous

land uses, b) controlled development and reduced the chances for limited-income households to find affordable housing, and c) limited neighborhood human services facilities, such as homeless shelters.

The NIMBY syndrome is also, in many instances, supported by local land-use regulations that confine manufactured housing (particularly, single-section units) to mobile home parks or small lot subdivisions, excluding them from most residential districts. NIMBY actions affect the placement of manufactured housing and consequently limit the affordable choices available to limited-income households. For example, in 1986, only 16 states allowed manufactured housing in residential zoning districts outside mobile home and trailer parks (Sanders, 1986). Today, however, more states recognize the role of manufactured housing as a low-cost alternative and are actively advising local governments to promote the use of manufactured homes as a means to reach acceptable housing affordability levels (White, 1992; HUD, 1991).

In summary, affordable housing for limited-income households can take many forms, from subsidized units of single-family detached dwellings, multifamily apartments, cluster developments or single-room occupancy units, to low-cost modular, panelized, and manufactured homes. These affordable options, however, have experienced public opposition which have resulted in NIMBY practices across the nation. Consequently, the NIMBY syndrome is a threat to alternative forms of housing that alleviate the housing cost burdens of limited-income families and first-time homebuyers.

Problem Statement

Placing manufactured housing in most communities becomes a difficult task to perform partly due to the development of NIMBY attitudes which translate into community opposition. Because some communities find ways to use local zoning laws to control the placement of manufactured homes (particularly single-section units), many limited-income homebuyers are excluded from residential developments and are further restricted to mobile home parks or subdivisions, or isolated rural areas.

Many years of regulatory changes, housing needs research, and redesign of manufactured housing units have created a new housing product that addresses many of the perception problems of the past. Despite these improvements, negative perceptions about manufactured housing continue to prevail. Thus, research is needed to determine NIMBY attitudes and community opposition to manufactured housing.

Purpose and Objectives of the Study

This study examined the opinions held by community residents regarding manufactured homes and their residents in the state of Virginia. This study sought to identify the most relevant factors affecting the perceptions and opinions which lead to opposition or acceptance of manufactured housing. The study also addressed how the respondents' perceptions of their neighborhoods affect or contribute to the development of NIMBY attitudes towards manufactured homes.

Objectives

The objectives of this study were to determine:

1. Which selected characteristics of the neighborhood residents (i.e., respondents) and their communities contributed to the development of perceptions and opinions about manufactured homes, their occupants, and the neighborhoods in which they are located.
2. Whether perceptions about manufactured homes played a significant role in the respondents' level of acceptance for the location of manufactured homes in their neighborhood.
3. To what extent perceptions about manufactured home households explained levels of acceptance or attitudes toward the location of manufactured homes.
4. Whether perceptions regarding neighborhood social and physical characteristics played a significant role in the development of levels of acceptance or attitudes toward the location of manufactured homes in a neighborhood.

Research Questions

The research questions were:

1. To what extent do perceptions about manufactured home characteristics affect or determine individual attitudes toward manufactured homes?

2. To what extent do perceptions of manufactured home households affect or determine individual attitudes toward manufactured homes?
3. To what extent do perceptions of the respondent's neighborhood characteristics or suitability for manufactured homes affect or determine individual attitudes toward manufactured homes?

Delimitation of the Study

This study did not concentrate on the regulatory barriers to the placement of manufactured housing in a community. The research was conducted within rural and suburban areas in the state of Virginia and the researcher did not concentrate on developing mechanisms for overcoming NIMBY attitudes. The state of Virginia was chosen because of the availability of research funds.

Limitations of the Study

This study was limited to the Commonwealth of Virginia; specifically, non-metropolitan counties [Non-MSA]. Furthermore, it covered eight counties in the state that exemplified communities from the Urban Crescent, Southwest, Southside, and Central regions of Virginia. The counties are illustrated in Table 1 according to the state region and percentage (i.e., highest or lowest in region) of mobile homes present in the county. Subjects involved in the statistical analyses resided in rural communities of Virginia.

Table 1
Selected Counties in Virginia

Region	County Name	Planning District Commission (PDC)	% Mobile Homes, Trailers & Other
Central	Bath	Central Shenandoah	Low (17%)
	Craig	Fifth	High (26%)
Southside	Southampton	Hampton Roads	Low (15%)
	Buckingham	Piedmont	High (29%)
Southwest	Pulaski	New River Valley	Low (15%)
	Buchanan	Cumberland Plateau	High (38%)
Golden Crescent (North to Southeast)	Rappahannock	Rappahannock-Rapidan	Low (2%)
	King & Queen	Middle Peninsula	High (30%)

Assumptions of the Study

This study assumed that there will continue to be a demand for manufactured housing as a form of affordable housing in the future and that the problems of housing affordability for limited-income and first-time homebuyers will continue to exist. It also assumed that there is a trend in Virginia to create legislation that will allow manufactured homes in residential zoning districts in addition to agricultural zoning districts.

Importance of the Study

Previous studies have concentrated on NIMBY actions toward toxic waste dumps, landfills, trash incinerators, group homes for the mentally-ill, shelters for the homeless, hospices for AIDS victims, halfway homes, and nuclear plants. All these structures have one common characteristic; they all are public or human service facilities. No study to date had addressed NIMBY actions regarding private residential structures outside service facilities.

Manufactured homes, in this case, are not public service facilities but another option for housing today's middle- and limited-income households and first-time homebuyers (Goss, Parrott, & Engelen-Eigles, 1992; Nutt-Powell, 1982). Therefore, the nature and development of the NIMBY attitude in community residents may involve different factors that could cause or trigger sentiments of rejection towards manufactured housing and its residents. Brion (1991) argues, NIMBY is not a problem in itself but a "phenomenon that symptomizes a problem" (p. xiii). And the problem is a perceived harm brought by the presence of manufactured housing that causes people to object to their placement in residential communities. This study attempted to fill a gap in the housing research which exists due to the relatively small amount of literature about the development of perceptions and acceptance levels regarding manufactured homes, manufactured home households, and neighborhood suitability or "fit" for manufactured homes. Results from this study could serve to support public policy decisions in Virginia regarding regulations about the placement

of single- and double-section manufactured homes in various zoning districts.

Definition of Terms

Attitude

Attitudes are predisposed actions which are consistently favorable or unfavorable towards an object. Attitudes are learned. They also refer to a person's favorable or unfavorable feeling, affect or evaluation about an "object." In this study, attitudes exemplified the "acceptance level" or outcome that a respondent had regarding the manufactured homes in his or her neighborhood.

Beliefs

A belief links an "object" to some "attribute." Beliefs are cognitive (i.e., opinions) and have various degrees of strength. A belief involves a link between an object (i.e., manufactured housing) and a content category or attribute. Beliefs, in this study were referred to as "perceptions or expectations" held by neighborhood residents in relation to the potential impacts that manufactured housing may bring to their communities.

Neighborhood

In this study, neighborhood referred to the perceived geographical area within a larger society in which people with common interests and services reside.

Geographical proximity

Also called the closeness factor, relates to physical proximity to a Locally Unwanted Land Use [LULU]. Greater physical proximity tends to be associated with

increasingly negative attitudes or NIMBY syndrome (Dear & Gleeson, 1991).

Innovativeness

Personality trait which may contribute to the development of acceptance or rejection levels towards an object. An individual regarded as innovative is believed to have a higher acceptance level for new and alternative forms of housing.

Manufactured housing

Any single-family factory-built residential structure that rests on a permanent chassis, is transported fully assembled to a provisional or permanent foundation on a rented or owned site, and bears a HUD approval label for its construction.

NIMBY syndrome

Not in My Back Yard syndrome, "refers to the protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their neighborhood." (Dear, 1992, p.288)

Single-section manufactured home

Sometimes called "single wide," this term referred to manufactured houses that are self contained in one section usually not greater than 14'-16' in width and approximately 70' in length.

Double-section manufactured home

Sometimes called "double wide," this term includes double-sections or multiple components that when placed together provide more space than the basic single-section home (Nutt-Powell, 1982).

CHAPTER 2

REVIEW OF RELATED LITERATURE

Literature available on manufactured homes and NIMBY is scarce; however, this chapter includes studies that contribute relevant information regarding acceptance or rejection of manufactured homes. Research findings are reviewed on the evolution of manufactured housing, a history of NIMBY research, impediments to manufactured housing, manufactured housing characteristics, manufactured housing household characteristics, neighborhood characteristics, and personal innovativeness toward housing. A conceptual framework is presented along with a proposed theoretical model.

The Evolution of Manufactured Housing

The term "manufactured home" is the latest attempt by the federal government and housing industry to describe a form of single-family dwelling which is assembled at a factory and delivered to a site. The predecessor to manufactured housing was the travel trailer of the 1920s, followed by the mobile home of the 1950s and 1960s.

According to Wallis (1991), the annual production of trailers, designed to be towed by an automobile, increased during the 1930s and 1940s mainly because of their use for military housing during the World War II years. Increased advertisement, use, and production of trailers made them more visible to the nation. At that time community opposition to the location of this type of transportable dwelling in residential neighborhoods became evident. Although the travel trailer was designed

primarily for vacationers, the impoverishment resulting from the Great Depression era forced poor families into trailers for permanent housing (Brown & Sellman, 1987). Trailer camps thus acquired the image of "shantytowns on wheels" and the cycle of negative perceptions began to set in the minds of conventional housing residents.

The size of the travel trailer increased to a width of 10' in 1954 and thus gained its new terminology as a "mobile home" even though the general public still called it a trailer. This single 10'-wide mobile home became even larger in the 1960s when the 12'-wide and later the 14'-wide mobile home dominated production. In 1969, double-wide mobile home models became available to consumers (Wallis, 1991).

During the late '60s and early '70s, 2.5 million mobile homes were produced at no direct cost to the federal government, thus, being the most affordable non-subsidized form of housing. Mobile homes were recognized by the federal government as legitimate forms of permanent housing for American society. Recognition, however, translated into a national exposure which raised questions about regulation of the industry regarding the safety and durability of the units. In 1976, legislation that regulated the construction of mobile homes was enacted when Congress passed the Mobile Home Construction and Safety Standards Act (42 U.S.C. Section 5402(6), 1976).

Although mobile homes provided more substantial housing for their residents, they continued to carry the stigma of impoverishment and impermanence associated with trailers (Brown & Sellman, 1987). Negative perceptions were also fueled by the

treatment of mobile homes as "over-the-highway" vehicles which required vehicle registrations and the display of motor vehicle tags. The treatment of mobile homes as vehicles also impacted on taxes because these units were taxed as personal property and not as real estate. In summary, mobile homes were perceived by conventional homeowners as structures inadequately designed for permanent housing.

Moreover, Brown and Sellman (1987) argued that these homes were thought to attract undesirable transient people with unconventional lifestyles. Traditional homeowners anticipated the worst from these undesirable mobile homes (e.g., fire hazards, diminution of property values, and a burden for municipal services). Concerned residents throughout the nation brought pressure on local governments to ban mobile homes from residential neighborhoods. The resulting ordinances were drafted on assumptions mainly based on the "mobility" aspects of this type of dwelling.

During later years of mobile home development; however, it became apparent to people in the home manufacturing industry that these units were rarely moved from the trailer parks or the subdivisions (Wallis, 1991; Brown & Sellman 1987; Nutt-Powell, 1982). Consequently, in 1980, Congress officially recognized mobile homes which met the 1974 National Manufactured Home Construction and Safety Standard code (a preemptive code regulated by HUD) as "Manufactured Homes" or "HUD-Code Homes." In fact, pursuant to section 308(c) of the Housing and Community Development Act of 1980 (Pub. L. No. 96-399, Sect. 308, 94 Stat. 1614, 1640-41),

the term "manufactured home" was substituted for "mobile home" in all relevant sections of the National Housing Act, The United States Housing Act of 1937, and the Housing and Community Development Act of 1974 (Brown & Sellman, 1987).

Today, manufactured homes have escalated in quality, design, consumer appeal, energy efficiency, and size. In addition, there is readily available financing and recognition from federal mortgage agencies (Wallis, 1991). Despite all these improvements, the general public still considers manufactured housing as inferior housing that does not belong in conventional residential communities (HUD, 1991; Brown & Sellman, 1987). Evidence of the consequences of such community opposition to mobile homes can be found in exclusionary practices employed by various communities throughout the nation.

Brown and Sellman (1987) researched various state and local laws concerning manufactured housing. They found that in spite of growing consumer acceptance of manufactured homes, many governmental entities enacted restrictive statutes and zoning ordinances that either totally excluded manufactured housing from their communities or severely restricted its siting to specifically designated areas, such as agricultural zones. In short, Brown and Sellman (1987) recognized that mobility, health hazards, and lack of safety are no longer valid arguments to justify exclusionary zoning practices. Still, many local governments are slow to respond to the technological advances and to differentiate between mobile homes and trailers as primitive predecessors from the newer and updated manufactured homes.

Impact of Legislation on Manufactured Homes

During its evolution, manufactured housing has been the target of changes in state and local legislation. In 1939, the New York City Court ruled in favor of the plaintiff, a trailer inhabitant, and against the City of Rochester. In *City of Rochester v. Olcott* (1939), the occupants of a trailer were charged with unlawfully using a trailer as a residence for longer than forty-eight hours without having a permit from the city. The court invalidated the City's ordinance. This was the first time that local governments were challenged over their regulatory powers over trailers (Brown & Sellman, 1987).

Later in 1976, and again in 1987, the state of Iowa enacted legislation that prohibits the outright exclusion of manufactured homes by local governments (Brown & Sellman, 1987). In 1982, the state of California enacted legislation from the California Government Code Section 65852.3 to prohibit the exclusion of mobile homes on single-family lots (Hobrecht, 1982). However, this California law did not preclude municipalities from requiring extensive permitting and application review periods or from requiring additional regulatory standards that often exceeded those required from developers of site-built houses. By 1987, many other states had created new legislation regarding manufactured housing, including: Colorado, Florida, Kansas, Minnesota, Nebraska, New Hampshire, New Jersey, Oregon, Tennessee, Vermont, and Michigan among others (Brown & Sellman, 1987).

In spite of new legislation, local governments regulated manufactured housing based on requiring it to meet codes and building standards similar to those required for stick-built housing. That is, local governments imposed additional codes on manufactured homes even though these units must meet the federally preemptive HUD Code (Flynn, 1983). Many localities in the South actually required in their ordinances that manufactured homes bear not only the HUD-Code seal but also the state's department of community affairs (DCA) seal certifying that the unit meets the Southern Standard Building Code (SSBC) and other "applicable" codes. Thus, manufactured homes were singled out of many areas because they did not meet the SSBC code and did not have a DCA seal.

However, in some states, these local practices have been challenged. For example, in Florida, in the case of *Scurlock v. City of Lynn Haven* (1988), the owners of a manufactured home and Statewide Mobile Homes of Florida, Inc. challenged the city zoning ordinance before the United States Court of Appeals on April 1, 1987. In this case, the City had denied the owners of a manufactured home the permit to place it on property they owned in a residentially-zoned area. The city's municipal code excluded all houses that did not meet SSBC or did not bear the Florida DCA seal. The Court ruled that the federal (HUD) code clearly precludes states and municipalities from imposing additional construction and safety standards upon manufactured homes which differ from those developed by HUD. In sum, municipalities in Florida may not prevent manufactured homes from being situated on

residentially-zoned properties based on noncompliance with SSBC.

Another legislative achievement took place when, in 1988, the state of California set a precedent for defining a local government's authority to regulate the siting of manufactured homes in residential neighborhoods. California's Senate Bill 2741 (1988) and Senate Bill 2827 (1988) created changes in section 65852.3 and section 65852.4 of the Government Code to ensure that manufactured homes are subjected to the same regulatory standards (e.g., use permits) applied to site-built homes. Local governments, however, are still allowed under this law to impose a limited amount of architectural requirements on manufactured homes (even if these are not imposed on site-built houses) to ensure the architectural quality of manufactured homes. In summary, manufactured homes are subject to different regulations depending upon the geographical location.

Manufactured Housing in Virginia

Mobile homes in the rural South became more readily available to families during the seventies. In fact, according to Weber, Beamish and McCray (1989), from 1970 to 1980 the number of mobile home units increased by 137.98% in the southern region, by 114.54% in the S-194¹ southern states², and by 112.03% in Virginia (which

¹ S-194 stands for the Southern Regional Research Project S-194, "Barriers and incentives to affordable housing in rural Southern communities," funded by the USDA Agricultural Experiment Station Regional Research funds under the Hatch and Evans-Allen Acts.

² The S-194 southern states were: Alabama, Arkansas, Georgia, North Carolina, Oklahoma, Tennessee, and Virginia.

ranked 5th among the S-194 states).

Likewise, during the eighties, the percent change in mobile homes for the state of Virginia increased significantly in rural areas. For example, from 1980 to 1990, Fauquier, Spotsylvania, Augusta, Mecklenburg, Craig, Buckingham, and King and Queen counties had a percent change in mobile homes that ranged from 100% to 1,437.5%; while other counties also experienced almost a two-fold increase in mobile homes (Koebel, Cavell, & Morgan, 1993). These figures suggest that manufactured housing represents a growing trend of readily available housing for rural consumers.

According to Koebel, Cavell, and Morgan (1993), in 1990, mobile homes were scarce throughout rural cities and suburban areas of larger metropolitan areas in Virginia; but most significantly, they were prevalent in the southwest and southeast regions of the state. Additionally, in 1990, the number of manufactured and mobile homes comprised 7.3% of the total number of housing units (inclusive of vacant and occupied units) in Virginia.

Koebel, Engelen-Eigles, and Cavell (1991) noted that single-family housing (including mobile homes) is the most prevalent form of housing in rural Virginia. In fact, single-family units represented 93% of the total rural housing stock in 1990. Additionally, the production of single-family housing in the '80s was partly enhanced by the manufactured housing industry and its ability to deliver its product to rural consumers in Virginia.

During the '80s, many rural communities in southwest Virginia, the I-81 corridor, and along the southern border relied on manufactured housing for the provision of single-family dwellings. This can be exemplified by the fact that manufactured homes in the 1990 census accounted for 20% to 33% of the total number of new housing units added to the state's housing stock. In addition, manufactured housing in rural areas of Virginia was preferred over multi-family dwellings and was more likely to be owner-occupied than other single-family detached dwellings (Koebel, Engelen-Eigles, & Cavell, 1991).

In the past decade, the state of Virginia incorporated legislation to the Code of Virginia to include regulations pertaining to the manufactured housing industry, zoning regulations, and building codes. For example, the current legislation pertaining to zoning for manufactured housing only allows manufactured homes in agricultural zoning districts. However, this legislation is recent and many more changes are needed before manufactured homes can be allowed in all residential zoning districts. In fact, the Virginia General Assembly in its 1991 Session enacted legislation allowing double-section manufactured homes, on permanent foundations, to be located on individual lots in agricultural zoning districts. Single-section manufactured homes were excluded from this law. The most recent bill introduced before the Virginia General Assembly (S. 641, Jan. 11, 1995) amended and reenacted Section 15.1-486.4 of the Code of Virginia relating to zoning of manufactured housing. This bill amended the 1991 law to include single-section units in addition to

double-section units; this law went into effect July 1, 1995. To date, no known legislation in Virginia allows for the placement of manufactured housing in residential zoning districts.

Legislation in Virginia also had an impact on taxation of manufactured housing (*Taxation of manufactured homes*, 1994). According to C. L. McIver (personal communication, May 15, 1995), the Associate Director of the Code Enforcement and Manufactured Home Office at the Virginia Department of Housing and Community Development [VDHCD], manufactured homes in Virginia are considered personal property; however, they are taxed at a real estate rate by local governments, in the same manner that single-family units are taxed (*Taxation of manufactured homes*, 1994). In a typical purchase, for example, the Department of Motor Vehicles (DMV) collects a sales fee and issues a personal property title to the manufactured home buyer. Manufactured home buyers also need to obtain the necessary local permits for sewer and water hook-ups and to pay for a tax permit with the local department of taxation, before moving the unit to its final destination as a residence.

Furthermore, under specific conditions, manufactured home owners can request the local jurisdiction to reclassify the manufactured home as real estate property. These conditions include the placement of the unit on a permanent foundation, the removal of axles and wheels, and the possession of a clear title to the land. If a manufactured home unit meets these criteria, then the title to the manufactured home can be sent to the DMV to be rescinded. Then the local jurisdiction can reclassify the

manufactured home as real estate and issue a new real estate title (C. L. McIver, personal communication, May 15, 1995).

Virginia legislation also provides mechanisms to regulate manufactured home industry licensing, consumer protection, and quality control. In the past, manufactured home industry licensing was a responsibility of the Department of Motor Vehicles. However, in 1991, House Bill 729 incorporated an amendment to Section 2.1-1.6 of the Code of Virginia to create the Virginia Manufactured Housing Board within the Virginia Department of Housing and Community Development. This board is now directly responsible for licensing the manufactured home industry and maintaining the Transaction Recovery Fund Law (as amended in 1992 and 1994). Licenses are required for resident or nonresident manufactured housing manufacturers, dealers, brokers, and salespersons conducting business in Virginia. The transaction recovery fund regulations include consumer complaints and resolution procedures, warranty requirements, restrictions on advertisement practices, and provisions for manufacturer/dealer sales agreements. The transaction recovery fund also establishes a procedure for the board to set licensing fees and handle the manufactured home consumer protection program (Virginia Department of Housing and Community Development, 1994).

A History of NIMBY Research

The NIMBY syndrome has been researched mainly from two sides: a) the health hazards posed by "noxious" facilities such as nuclear plants, landfills, and

incinerators; and b) the negative impacts caused by the addition of human services facilities like emergency shelters, hospices, group homes, and the like to residential neighborhoods. One side of the NIMBY phenomenon that has not been widely researched is the one related to community opposition to lower-income or affordable housing alternatives. Exceptions to this are the work completed by the Advisory Commission on Regulatory Barriers to Affordable Housing (HUD, 1991) and the work completed by the Housing Assistance Council (HAC) on overcoming NIMBY in rural communities (Stover et al., 1994). Other studies (Warner & Scheuer, 1993; Dear, 1991; State of California Department of Housing & Community Development, 1990; Gruber, Shelton & Hiatt, 1988; Nutt-Powell, Hoaglin & Layzer, 1986; and Hicks 1982) addressed research on declining property values due to proximity to low-income housing and "noxious" structures.

Research studies on NIMBY and housing have been focused on the regulatory barriers and on the role played by public officials. One study notes that because of NIMBY, various alternative forms of housing intended to serve lower-income groups are very difficult to site, thus economically-disadvantaged groups are denied access to affordable housing (HUD, 1991). Overall, studies dealing with the NIMBY syndrome do not explore in depth the attitudes and opinions held by community residents about alternative forms of housing; in particular, manufactured housing.

Impediments to Manufactured Housing

Although under current provisions of the Fair Housing Amendment Act of 1988 it is unlawful to discriminate or deny access to housing to some groups (e.g., disabled people and older adults), most human services facilities face regulatory barriers that are based on common misconceptions. Misconceptions typically argued by neighborhood residents relate to the type of people served by the facility and the physical appearance of the facility and how these factors would impair the monetary and social value of their neighborhoods and real estate. The same could be true for the case of opposition to alternative residential structures like manufactured housing.

Goss et al. (1992), found in their study of mobile homes in Appalachia that community residents were aware of prejudice against mobile homes. Much of this prejudice was due to a dislike of all forms of low-income housing, crowded and poorly maintained mobile home parks, and the "box on wheels" appearance of the units, among other arguments.

Similarly, O'Hare and O'Hare (1993) argued that many Americans are very concerned about "status" and these socioeconomic status concerns limit the market for manufactured homes. Status-conscious citizens often influence exclusionary zoning laws that keep manufactured homes, for instance, out of middle-class neighborhoods. In fact, zoning often reinforces class exclusion in general, not just for manufactured homes.

Flynn (1983) notes, however, that to many American families, manufactured housing represents an affordable and attractive dwelling alternative. Through large-lot zoning and land use practices, many communities have excluded multifamily dwellings and mobile homes which are often more affordable than single family housing (Morris & Winter, 1978). Flynn (1983) also argued that the existing regulatory environment, which echoed old prejudices, constituted an impediment to the increasing use of manufactured housing. Restrictive and exclusionary zoning, lack of sufficient financial mechanisms, and inadequate taxation laws and local building codes which do not address manufactured homes are examples of the type of barriers affecting manufactured housing throughout the years. Exclusionary regulations, in general, have been the result of the incorporation of misconceptions and prejudice into local law (HUD, 1991).

HUD (1991) outlined in the report by the advisory Commission on Regulatory Barriers to Affordable Housing the causes and consequences of the NIMBY Syndrome. The main argument in this report was that NIMBY too often precipitates "restrictive and excessive government land-use and development regulations that add unnecessarily to the cost of housing." (p. 1-1). In this report, the Advisory Commission noted that excessive regulations and exclusionary zoning ordinances, often derived from the NIMBY syndrome, could contribute from 20 to 35 percent of the increase in housing prices in most affected areas throughout the country.

Arguments for Opposition

Fear of declining property values is argued to be the main force behind NIMBY (Fletcher, 1990; Branson, 1992). Homeowners tend to oppose anything that may lower property values. As such, the anticipation of higher density and differing or unconventional forms of housing often gives rise to negative perceptions about future property values. Homeowners are very protective of property values because they like to secure their interest and investment in their property in case they decide to sell; in which case, they expect to recoup their equity and also make a profit (Perin, 1977). Additionally, opposition arguments often are reduced to three main concerns: property values, personal safety, and neighborhood amenity (Stover et al., 1994; Dear, 1991).

Dislike for the manufactured home residents based on racism or ethnic prejudice is also argued to be part of a personal basis that fosters the NIMBY attitude and is masked behind concerns, such as declining property values or increases in traffic, often expressed by NIMBY advocates (Fletcher, 1990; U.S. Department of Housing and Urban Development, 1991). Home builders and developers may use similar arguments to mask their fear of sales competition from the less expensive manufactured homes (Branson, 1992).

Social class prejudice based on stereotypes about the "kind of people" who reside in mobile homes and manufactured housing also contribute to the development of NIMBY. Particularly, when the perception of mobility of the manufactured home

causes people to form attitudes towards the kind of people who reside in "transient" housing (Brown & Sellman, 1987). Insufficient exposure to "different" also makes people more apprehensive and prejudiced about unconventional "types" of people and residential facilities (Takahashi, 1992).

Perin (1977) argued that stereotyping goes beyond income level characteristics. The type of house and the form of tenure also add to the stereotype of how low-income people follow housing norms that result in certain kinds of unacceptable behavior. Thus, a family that is low-income and resides in a rented manufactured home can be subject to stereotyping as to the expected behavior the members will display in the community. "A lower-income group is seen somehow to affect 'me and my family' 'adversely'--a proposition that implies that they will engage in behavior guided by norms not simply different but harmful." (Perin, 1977, pp. 98-99)

Historically, traditional homeowners who desire to maintain neighborhood physical homogeneity have expressed the following negative statements to support their arguments for incompatibility of manufactured homes in residential areas: "Once a trailer, always a trailer;" "trailer is a trailer is a trailer;" and "a mobile home by any other name would be a mobile home" (Brown & Sellman, 1987; Bartke & Gage, 1970). Dear and Taylor (1982) noted that the desire to maintain neighborhood homogeneity makes a difference in the development of community attitudes like NIMBY. Neighborhood compatibility and homogeneity is often protected by exclusionary zoning laws and practices, and in reality, is often one of the most

desirable neighborhood features for a homebuyer. Perin (1977) also notes that neighborhood social and physical homogeneity provides a sense of stability that translates into a guarantee that property values are protected and will not decrease.

Furthermore, in the social context of housing, Morris and Winter (1978) include perceived homogeneity in their model for explaining neighborhood norms. As a norm, neighborhood homogeneity is highly important for families with children. This perception of homogeneity demands residents with similar socioeconomic characteristics (i.e., social class, life-cycle stage, education, age, race, and sometimes ethnic background) and that the area be zoned exclusively residential, have good schools, and be safe from traffic and crime. Homogeneity in terms of actual architectural appearance (aside from the structure-type norm that calls for single-family dwellings) was not addressed under Morris and Winter's neighborhood norms. The norm for structure type (i.e., single-family dwelling) appears to be strongly related to families with children.

In short, there are various arguments for opposing unwanted land uses. For example, some of the reasons for NIMBY, as noted by HUD (1991), are concerns about: (a) upholding property values, (b) maintaining service levels, (c) preserving community ambiance or homogeneity, (d) protecting the environment, (e) reducing fiscal impacts, and (f) guarding the community's public health and safety.

At present, most communities do not allow the siting of alternative forms of housing such as group homes, Elderly Cottage Housing Opportunities (ECHO) for

senior adults, and manufactured homes in residential areas. For example, most zoning ordinances prohibit the placement of manufactured homes (particularly single-section units) in mixed use with established residential neighborhoods (HUD, 1991). Beliefs held by residents and public officials that support these ordinances include the fear of decreasing property values and a dislike for the kind of people that own a manufactured home. In short, the NIMBY syndrome affecting land uses comes from the personal sentiments of residents and public officials towards the addition of different types of housing in the community. The result is the "translation of NIMBY sentiment into codes and ordinances that effectively burden development and constitute barriers to affordable housing" (HUD, 1991, p. 1-1).

A study conducted by the State of California's Department of Housing and Community Development (1990) found no significant evidence that could prove that the mixing of housing types would be detrimental to the existing real estate property values. This finding applies to subsidized or non-subsidized, public housing, group homes, and manufactured housing. Results were based on a survey of findings from 15 research studies in small, large, suburban, and urban areas across the nation. These conclusions could serve to eradicate misconceptions that support the NIMBY sentiment held by community officials and residents.

Previous research conducted in the state of North Carolina also indicates that "proximity to manufactured housing is not associated with lower property values, at least with respect to selling price relative to appraised tax value of the property"

(Gruber, Shelton, & Hiatt, 1988, p. 44). In other words, physical proximity to manufactured housing does not necessarily decrease the property tax value assigned by a local tax department, but it may have an effect on the expected resale value or asking price at the time of sale in the market. Likewise, Nutt-Powell, Hoaglin, & Layzer (1986) concluded in their study that mobile/manufactured housing did not affect the property values of abutting, conventionally site-built, single-family dwellings in Belmont, New Hampshire. In addition, Hicks (1982) concluded that manufactured housing developments do not depreciate the property values of conventional adjacent neighborhoods. Similar results were also obtained by Warner and Scheuer (1993) with regards to rental manufactured home communities.

These studies do not address the effect that tenure status may have on property values of properties adjacent to manufactured homes. For instance, Wang, Grissom, Webb, and Spellman (1991) found an inverse relationship between housing values and the presence of rental properties in their study area in the state of Texas. In fact, the accumulation of single-family rental properties in a residential area appears to cause the same negative effects that are often associated with apartments and other undesirable types of housing.

In sum, greater physical proximity to facilities perceived as noxious is associated with increasingly negative community attitudes (Dear, 1991). Negative community attitudes exacerbate the NIMBY sentiment that leads to expressed community opposition toward any LULU, including manufactured homes. Despite all

research findings that disassociate manufactured housing from the common misconceptions held by many community residents, the fact is that NIMBY attitudes against manufactured housing exist. Even though manufactured homes today are quite different from their predecessors, the trailer and the mobile home, the typical community resident keeps the old image and thus the negative attitude. The negative attitude may in some cases be supported by the current image of unkept and dilapidated mobile home parks so often present in the outskirts of many rural towns and cities.

Opponents to manufactured housing. Neighborhood residents and local public officials, jointly or independently, often oppose manufactured housing. A study completed by Wolpert (1972) on community opposition suggests that the probability of actually rejecting manufactured homes is higher for local public officials acting alone than for community residents. When residents and officials join in their opposing efforts, chances are the manufactured home will be impossible to site. It is often a matter of political power of residents and how can they influence local zoning regulations (Wolpert, 1972). Conversely, low-income neighborhoods which lack political and economic power, expertise, ability and sometimes the desire to oppose, will most likely face any locally unwanted land use (LULU) siting, that is, if the locality allows manufactured homes in residential neighborhoods (Wolpert, 1972).

A description of the typical opponent to manufactured housing was not found in the literature. However, in terms of human services facilities, the typical NIMBY

advocate is, according to the Yankelovich Group (1989): high income, male, well educated, professional, married, homeowner, living in a large city or its suburbs. This portrait of the typical opponent suggests a politically empowered individual with the potential for addressing the unwanted land use at the local level with public officials. In addition, Piller (1991) noted that "Regardless of demographic traits, NIMBY battles share common characteristics: Nearly all begin with the frustrated rage and fear of people who perceive themselves as victims and who see their quality of life threatened." (p. 12) In some instances, NIMBY attitudes also bring to the surface not only the opposition demonstrated by empowered individuals but also the struggle that "powerless" residents have for local control and personal safety when faced with major environmental problems caused by inefficient levels of business and government (Piller, 1991).

In summary, a description of the characteristics of the typical manufactured housing opponent is currently missing from the literature reviewed in this study. Based on the housing-related neighborhood norms described by Morris and Winter (1978) and the results from the Yankelovich Group (1989) study, one can infer that families with children, homeowners, and households with high incomes, high social status, and high cost housing could be among those who would oppose manufactured homes.

Manufactured Housing Characteristics

As described earlier, manufactured home characteristics have changed significantly since the times of the motor home or travel trailer. Nutt-Powell (1982) noted that in spite of current improved appearance and higher construction quality, the conventional image of manufactured homes held by many consumers is that of a mobile home or trailer restricted to a trailer park in the outskirts of a town or city. Thus, community and public sector attitudes toward manufactured homes have been directly related to historic perceptions of earlier models or "trailers." However, actual manufactured housing occupants and owners hold more positive perceptions about this type of residential structure.

Nutt-Powell (1982) also argued that the availability and use of manufactured housing was a function of public sector attitudes and programs that perpetuated the historically negative portraits of this type of housing. He added that "[manufactured homes] have been perceived as cheap, flimsy, and unattractive housing intended for undesirable markets" (p. 147). Negative characteristics include items such as low quality construction and materials, inadequate designs, inefficient energy features, and unsafe and flimsy structure. Although these negative perceptions may no longer be accurate, they serve as impediments to wide spread use and marketability of manufactured homes.

In terms of resident satisfaction with manufactured home characteristics, a survey of suburban homeowners of manufactured housing versus owners of

conventional stick-built housing of comparable prices found no significant differences in their housing satisfaction levels regarding construction, exterior design, floor plan, group living spaces, private living spaces, support spaces, and support systems (Moore & Crocker, 1991). However, Moore and Crocker (1991) also indicated that manufactured housing owners could be showing high housing satisfaction levels because they had accepted the mass-produced appearance of manufactured homes at the time of purchase. Consequently, these homeowners had very clear expectations regarding manufactured housing.

Goss, et al. (1992) noted in their study of mobile homes in Appalachia that mobile homes fulfill a need of readily available housing, particularly when there is a lack of rental housing and the cost of buying or building a home is prohibitive. The almost "instant" availability of manufactured housing was found to be an important resource for Appalachian families going through a life transition period such as marriage, new jobs, moves, and other changes in lifestyle.

According to Morris and Winter (1978), another important characteristic of manufactured housing is the facilitation of homeownership for limited-income households. Manufactured housing can help prospective homebuyers meet homeownership as the preferred norm for tenure type. In many instances, homebuyers may turn to manufactured housing as a preferable alternative to renting, as manufactured housing may also meet the norms for structure type as a single-family detached dwelling. In fact, most manufactured-home owners are not only fulfilling the

norm for tenure through manufactured housing, but they are also moving to more expensive and larger multi-section manufactured units. This shift to more expensive manufactured housing occurred because the prices for site-built housing rose sharply in the 1980s and manufactured homes stayed relatively more affordable (O'Hare & O'Hare, 1993).

Data from the 1990 Census of Population and Housing and the Summary Tape File 4 (Bureau of the Census, 1993a, 1993b, & 1993c) shows approximately 78% of all renter- and owner-occupied manufactured homes in Virginia are located in rural areas. In addition, 37.4% of all renter-occupied manufactured homes in Virginia were built during the seventies; 27.0% were built during the eighties; and 35.5% were built before 1970. Therefore, approximately 40.0% of all renter-occupied manufactured homes were not built according to the 1974 HUD Code. In contrast, approximately 41.6% of all owner-occupied manufactured homes in Virginia were built during the eighties. Similarly, 40.0% of all owner-occupied manufactured home units were built during the seventies, and 18.4% were built before 1970. In terms of unit size, 61.0% of all manufactured homes, both renter- and owner-occupied, have two bedrooms or less and approximately 39.0% have three or more bedrooms. In summary, 1990 census data indicates that owner-occupied manufactured homes are on average newer than renter-occupied manufactured homes and therefore more likely to have been constructed in accordance with the higher manufacturing standards of the HUD code.

Manufactured Housing Occupants' Characteristics

Nutt-Powell (1982) noted that manufactured houses are structurally, aesthetically, socially, and culturally considered "second-rate housing for second-class people" (p.92). One could surmise that the phrase "second-class people," encompasses persons with low-socioeconomic status, low-education levels, limited incomes, unstable family structures, and anti-social behaviors.

Despite these perceptions, Moore and Crocker (1991) compared characteristics of owners of manufactured housing and conventional housing from the same "mixed" housing subdivision and where both manufactured and conventional units had similar values. They found no significant differences in homeowner satisfaction of the manufactured and conventional houses and some socioeconomic characteristics. Those characteristics were: race, gender, age, family composition, family income, occupation, educational background, previous housing, housing status, and residence background. Homeowners with similar incomes and purchasing power characteristics expressed satisfaction with their housing regardless of whether it was built on site or in the factory.

In contrast, O'Hare and O'Hare (1993) indicate that in 1990, mobile home households, when compared to all housing residents, were more likely to be headed by a young adult and have occupants with less education and lower incomes than residents of conventional housing. Further, mobile home households are more likely to be non-minorities (about 90%) when compared to conventional housing residents.

O'Hare and O'Hare (1993) account for this by noting that most mobile homes in 1990 were located in rural areas; and minorities were mostly concentrated in urban areas. In short, the literature supports the notion that, in general, there are socioeconomic differences (i.e., income, education, and race) among residents of manufactured homes and residents of conventional homes.

According to the 1990 Census of Population and Housing, Summary Tape File 4 (Bureau of the Census, 1993c), most of Virginia's owner-occupied manufactured homes householders are below the age of 60 (77.9%). In addition, 75.3% of all owner-occupied manufactured home households consist of three persons or less. Furthermore, renter-occupied manufactured homes have more householders under the age of 60 (84.7%) and more households with three persons or less (77.1%) when compared with owner-occupied manufactured home households.

Finally, the 1990 PUMS Computer Tape for Virginia (Bureau of the Census, 1992) indicates that most manufactured home householders (both renters and owners) are between 25 and 34 years of age. Moreover, 84.6% of all householders are white, married with no children (32.3%) or married with children (23.1%), and have total household annual incomes below \$35,000 (81.6%). In addition, about 15.1% of all manufactured home households are headed by a single parent (i.e., 11.8% are headed by females, in contrast to only 3.9% headed by males). In conclusion, most of Virginia's manufactured home households are owner-occupied, young, small in size, white, and have low- to moderate-incomes.

Neighborhood Characteristics

At present, most manufactured housing (particularly, single-section units) is restricted to parks or subdivisions. Most communities have separated conventional residential neighborhoods from parks or subdivisions containing manufactured homes. Although this exclusionary practice is being challenged at large, most arguments against mixing manufactured housing with conventional housing are based on the concept of neighborhood suitability or "fit."

There are various terms related to a neighborhood's suitability for manufactured housing developments; these are: congruence or fit and saturation level. Congruence and fit refer to the same theme -- that the manufactured home does or does not fit the profile of the homes located in the neighborhood. The saturation concept refers to the idea that a neighborhood may or may not have too many manufactured housing units. Further, residents of a neighborhood that has a higher percentage of manufactured homes may argue that they have reached a "limit" in terms of how many units they are willing to accept (Dear & Taylor, 1981).

Residents may consider both the present social and physical characteristics or structures of their neighborhoods and evaluate if these are compatible with manufactured homes. Thus, it is argued in this study that people's opinions about manufactured housing siting include not only the unit's physical structure or appearance and its residents, but also the social and physical structure of the neighborhood.

Innovativeness Toward Housing

Midgley (1977) defined innovativeness as a personality trait possessed, to a greater or lesser extent, by all members of a society or social system. This trait is based on the idea of time of adoption of an innovation; that is, when a person adopts an innovation versus when a society as a whole adopts the same innovation (Midgley & Dowling, 1978). Other researchers define innovativeness as a tendency to accept concepts which are believed to be innovative by a social system (Rogers & Shoemaker, 1971). Rogers (1983) also recognized innovative individuals as those who adopt an innovation relatively earlier than other members of a given social system.

In addition to the time of adoption of an innovation, an individual is considered a true innovator when there is little need for receiving favorable interpersonal information about a product (i.e., past experiences) from other members of society before the person adopts the innovation (Midgley, 1977). Because not all innovators adopt an innovation at the same time, Rogers (1983) classified innovators into five categories: Innovators, Early Adopters, Early Majority, Late Majority, and Laggards. In addition, Rogers (1983) found that early adopters are more likely to have higher levels of education, social status, and upward social mobility when compared to late adopters.

Innovativeness as a personal characteristic has been studied by several housing researchers (Till, 1988; Gruber, Beamish, Carter, Shelton, & Weber, 1990; Kwon,

1991; and Johnson & Beamish, 1993). These housing researchers measured innovativeness through the use of a scale developed by Gruber, et al. (1990). This "Innovativeness Toward Housing Scale" is composed of twenty-six items or questions which attempt to evaluate a person's level of innovativeness. Gruber, et al. (1990), used factor analysis (principal component with Varimax rotation) to evaluate the responses to the innovativeness scale from a 4,672 sample from the S-194 regional project: *Barriers and Incentives to Affordable Housing*. This analysis yielded six factors: New Housing Types, Repair and Fix Things, Chance Taking/Experimentation, Housing Design & Ideas, Improvement & Utility, and Appearance versus Comfort. Gruber, et al. (1990) later analyzed a subsample of 785 housing intermediaries (i.e., realtors, builders, lenders, etc.) from the same S-194 study and found the same six factors plus a new "Home Improvement" factor. Gruber, et al. (1990) also established a relationship between these factors and the following demographic characteristics of the household and intermediary samples: age, gender, education, and income.

Gruber, et al. (1990) 26-item scale has also been used to assess innovativeness toward manufactured homes among other types of housing. In fact, results from the S-194 regional research project on "Barriers and Incentives to Affordable Housing" show that persons who scored high on the personal innovativeness scale showed a higher acceptance level of housing other than site-built housing when compared to those with low scores (Day, Goss, Gruber, Hanna, Lentner, and McCray, 1991).

Till (1988) studied housing innovativeness among subsamples of households and housing intermediaries in four S-194 communities in Alabama. Till (1988) used factor analysis, the maximum-likelihood factor procedure, to group the 26 items. This analysis produced five factors: Active Innovative, Traditional, Craftsmanship, Semi-active Innovativeness, and Passive Innovativeness. Results from this study tied three innovativeness factors to demographic characteristics. For instance, the Active Innovative respondents were female, young, and black; while Traditional respondents were widows, less educated, older, and apartment renters. Furthermore, Craftsmanship respondents were likely to be males, mobile home residents, and homebuyers. Overall, Till's (1988) five factors were consistent with Gruber, et al. (1990).

Kwon (1991) also used the principal-component factor analysis with Varimax rotation in a study of the older population of the S-194 study sample (1,878 individuals over age 55). Her study yielded six factors: Experimentation & New Design/Ideas, New Housing Types, Repair & Fix Things, Improvement & Utility, Appearance versus Comfort, and Risk Taking. Four of these factors were also consistent with those found by Gruber, et al. (1990). Kwon (1991) found age of the respondent to be related to Experimentation & New Design/Ideas, New Housing Types, Repair & Fix Things, and Appearance versus Comfort. Younger respondents scored higher on these factors than older respondents.

Higher incomes of elderly respondents were associated with higher scores on the following four factors: New Housing Types, Repair & Fix Things, Improvement & Utility, and Appearance versus Comfort. Higher education levels were related to Experimentation & New Design/Ideas and New Housing Types. Lower levels of education were significantly related to the Improvement & Utility factor. Married individuals and men scored higher on the Repair & Fix Things factor.

Finally, Kwon (1991) found that elderly homeowners were more innovative on the New Housing Types and Repair & Fix Things factors; while elderly renters were more innovative on the Improvement & Utility factor. Elderly mobile home residents were found to be the most innovative respondents in the New Housing Type and Repair & Fix Things factors when compared with elderly respondents residing in other types of housing. Kwon (1991) also used multiple regression techniques to test the relationship between personal innovativeness toward housing and the acceptance of nontraditional housing types by the elderly. She concluded that the Repair & Fix Things factor had a positive relationship, at a $p < .05$ significance level, on the acceptance of mobile homes by elderly respondents.

Johnson and Beamish (1993) also adapted a scale to measure innovativeness toward housing from Gruber, et al. (1990). However, from the original 26-item scale, Johnson and Beamish (1993) only included items related to innovativeness and new ideas; thus resulting in a modified scale consisting of 16 items measured on a four-point Likert scale. Johnson and Beamish (1993) studied older adults' levels of

innovativeness toward housing alternatives that can provide options to maintain independence and enhance quality of life. The sample used consisted of 452 elderly females drawn from a population of 7,655 members of the Extension Homemakers Council. Using a principal-component factor analysis with a Varimax rotation, Johnson and Beamish (1993) obtained three factors which explained 59.6% of the variance. These factors were: Acceptance of New Housing Types, Willingness to Take a Chance, and Acceptance of New Ideas. Results from the Analysis of Variance showed that elderly respondents who are married and have higher incomes and education are more innovative and thus more willing to accept alternative types of housing. Respondent's age and current housing type did not show a significant effect upon the three innovativeness factors grouped by Johnson and Beamish (1993).

In sum, research studies suggest that acceptance of alternative forms of housing (e.g., manufactured homes) could be partially explained by several demographic characteristics associated with a person's level of innovativeness toward housing. Income, education, marital status, age, gender, housing type, tenure status, and race of the respondents appear to be related to several factors of the innovativeness scale.

Conceptual Framework Development

The conceptual framework for this study was partially based on the Fishbein-Ajzen's (1975) Theory of Reasoned Action for understanding the formation of community attitudes. This theory explains various steps that lead to outcomes, as delineated in this figure illustrating a causal model:

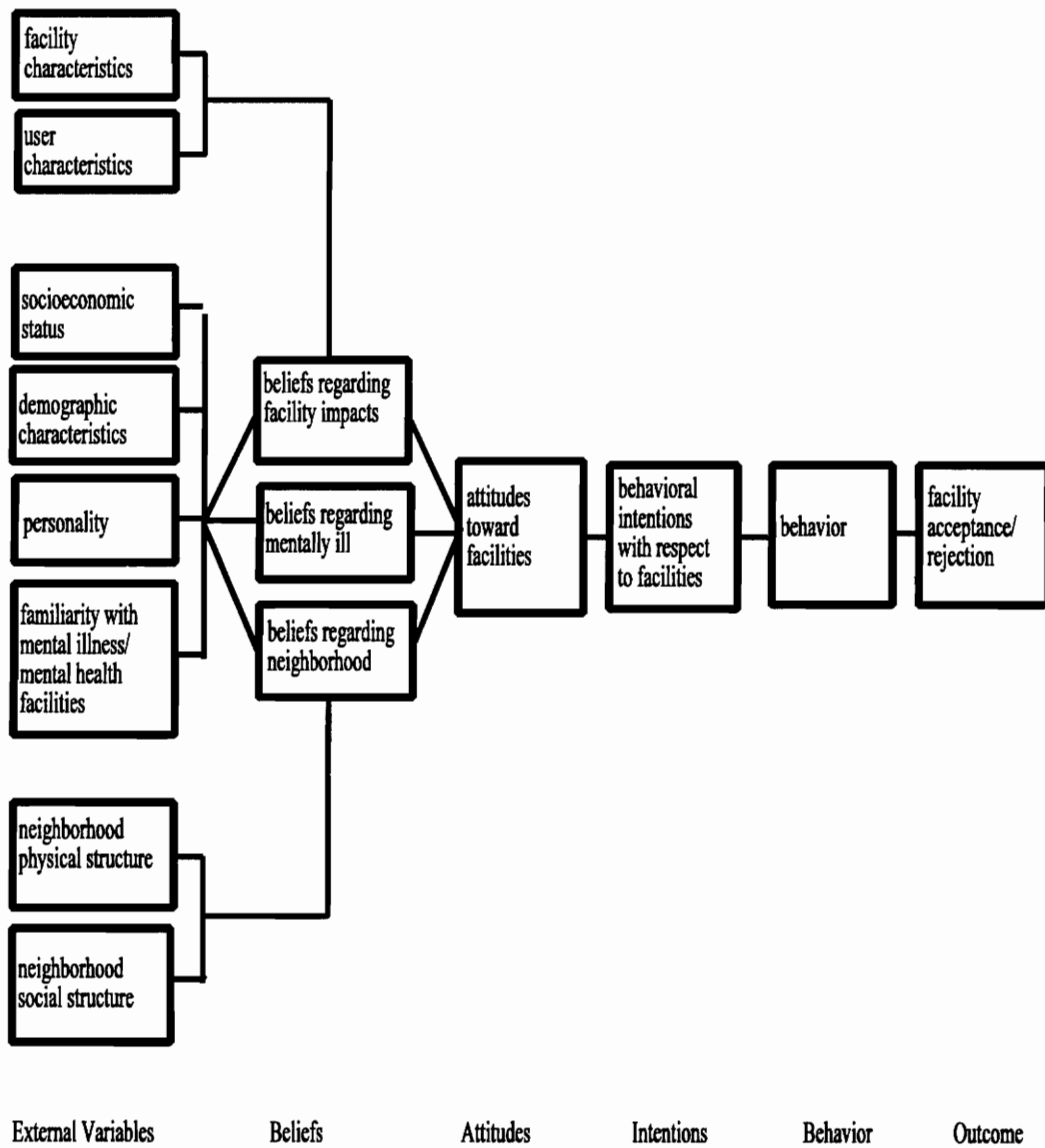
BELIEFS-> ATTITUDES-> INTENTIONS-> BEHAVIOR-> OUTCOME

Figure 1. Fishbein and Ajzen (1975) Model for Community Attitudes.

NIMBY as an outcome may be the result of negative attitudes toward manufactured housing. The model depicted in Figure 1 follows a cognitive approach to attitude and opinion formation because the attitudes toward salient objects (such as manufactured housing) fall under both behavioral and normative beliefs or perceptions categories (Ajzen and Fishbein, 1980). Behavioral beliefs or perceptions can be exemplified by people believing that by opposing the location of manufactured homes in their areas they will prevent their real estate property values from declining. On the other hand, normative perceptions or beliefs can be found in people who may accept the siting of manufactured homes in response to expectations from society to fulfill a social responsibility by helping those people trying to reach homeownership and affordable living.

Dear and Taylor's (1982) theoretical model of community attitudes to mental health care facilities (figure 2) was adapted from Fishbein and Ajzen's (1975) model (figure 1) and added external variables (or factors giving rise to perceptions or beliefs) to the 1975 Fishbein-Ajzen Model. Dear and Taylor (1982) found the strongest relationship between beliefs or perceptions and attitudes to be coming from

perceptions about the facility users (i.e., the mentally ill). In fact, their study supported the theory that attitudes toward facilities are a response to the facility users. Further, people who rate facilities as more undesirable are found to be more likely to intend and express opposition. The more negative their attitudes are, the higher the degree of commitment to individual action in opposition. It is yet to be tested if that conclusion is also valid or could be applied to the case of NIMBY beliefs and attitudes toward manufactured home households. Perceptions about the physical characteristics of manufactured housing were expected to be significant predictors of NIMBY attitude development.



(Source: Dear and Taylor, 1982, p.26)

Figure 2. Dear and Taylor's (1982) Model for Community Attitudes to Mental Health Care Facilities.

Ajzen and Fishbein (1980) distinguish between "behavioral" beliefs and "normative" beliefs as they influence the process of attitude formation. Behavioral beliefs are generated from individual perceptions about the consequences of a social behavior (i.e., siting manufactured housing in their community). Normative beliefs refer to culturally accepted or induced beliefs toward a particular social behavior or object. These normative beliefs respond to expectations from society or the community.

However, Dear and Taylor (1982) did not incorporate this difference into their study because their model was constructed at the individual level. Whether normative or behavioral, people hold a set of beliefs or perceptions that give rise to particular attitudes or opinions about an object or behavior. Therefore, the theoretical model for this study does not attempt to establish the differentiation between normative and behavioral beliefs or perceptions.

Theoretical Model

The theoretical model (figure 3) is an adaptation of Dear and Taylor's (1982) model (figure 2) on community opposition to neighborhood mental health facilities. This adapted model incorporated the following:

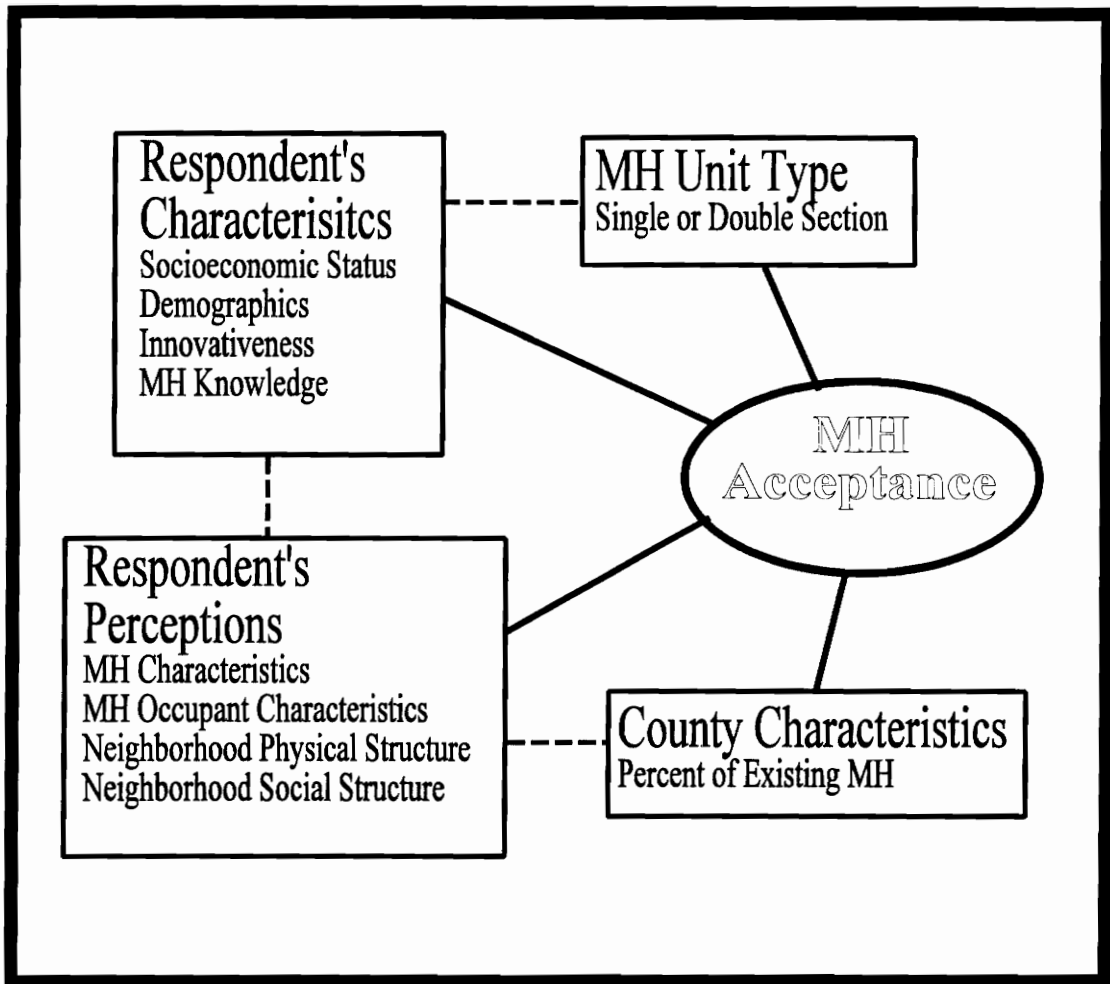


Figure 3. Theoretical Model: Acceptance of Manufactured Homes (MH).

External variables. According to Dear and Taylor (1982), during the past decades many studies have focused on using external variables to explain factors in behavioral research. However, in general, weak results failed to satisfy many attitude theories. In other words, the relationships between social behavior and external variables are often weak in their explanatory power.

Thus the usefulness of including these variables in the model depends on the research objective. On the one hand, Dear and Taylor (1982) argue that it is not useful to include them if the research goal is to achieve accurate prediction of a given behavior. On the other hand, including these variables is appropriate if the goal is to uncover factors underlying behavior. That was Dear and Taylor's goal in 1982 and they included external variables in their model as antecedents to beliefs, even though Fishbein and Ajzen (1975) and Ajzen and Fishbein (1980) place little emphasis on the role external variables play on attitude formation (acceptance level).

There are three sets of external variables that are included in the theoretical model (see figure 3), and they are indicative of situational and contextual attributes. The first set of external variables in this study is the type of manufactured housing; that is either single- or double-section units. The second set comprises the respondents' characteristics. The third set comprises county characteristics; that is, characteristics of the community or county where the respondents' neighborhoods are located.

The first set of external variables only includes one variable: The type of manufactured home unit. The type of manufactured unit (i.e., single- or double-section) is included in the model as a construct which may help predict the levels of acceptance of manufactured homes in an area.

The second set of external variables is measured at the individual level and includes personal characteristics of the neighborhood residents. This set is subdivided

into socioeconomic status (i.e., housing value, income, education, occupation, and housing tenure status), demographic characteristics (i.e., household size, age, race, and gender), innovativeness toward housing (i.e., personal innovativeness) and degree of knowledge about manufactured housing and its occupants (i.e., closeness, familiarity, and past experiences).

The third set of external variables includes community and neighborhood characteristics. This set departs from what Dear and Taylor (1982) regarded as neighborhood characteristics. The theoretical model was adapted to elicit potentially significant characteristics of rural and semirural communities in Virginia. Thus the second set of external variables is composed of one variable: Percentage of existing manufactured homes in the county. This variable serves to indicate regulatory restrictions of manufactured homes in the county and degree of closeness to a metropolitan statistical area.

Following the reasoning behind Dear and Taylor's (1982) model (figure 2), the three external sets of constructs should give rise to individual salient perceptions regarding manufactured home characteristics, manufactured home occupants, and the neighborhood's social and physical characteristics or overall suitability for manufactured homes.

Respondents' perceptions. Salient perceptions or beliefs are important to the theoretical model (figure 3) because perceptions are the basic fuel for acceptance level or attitude formation (Fishbein & Ajzen, 1975; Dear & Taylor, 1982). Personal

perceptions about objects such as manufactured homes can be negative or positive.

When a person regards manufactured housing as a way to help limited-income residents, that person holds a positive belief or perception. An example of a negative perception is to believe that the presence of manufactured housing and its occupants will cause a significant decrease in property values. As such, personal salient perceptions can be conflicting at times and thus are weighted in a person's mind before forming an attitude or opinion about accepting manufactured housing.

Figure 3 illustrates one set of salient perceptions from the neighborhood residents (i.e., respondents' perceptions) about manufactured home units, their occupants, and the respondents' levels of neighborhood homogeneity. This set is subdivided into (a) perceptions regarding manufactured home characteristics; (b) perceptions regarding manufactured home households; (c) perceptions about neighborhood physical structure or characteristics; and (d) perceptions about neighborhood social structure or characteristics. The last two constructs attempt to explain the neighbors perceptions of how suitable is the neighborhood for placing manufactured homes.

The literature includes very little on what these perceptions or beliefs may be. No study reviewed to date included a summary of such perceptions or an instrument to measure them. Only a few studies even refer to perceptions or beliefs regarding manufactured housing (HUD, 1991; Fletcher, 1990; Branson, 1992).

Salient beliefs or perceptions about an object often lead to the development of other perceptions regarding behavior (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). For example, people may believe that opposition to locating manufactured housing in their area may bring about positive outcomes (i.e., rejecting the siting). It is then when the attitudes toward the behaviors associated with their perceptions about the object start developing.

In sum, the external variables lead to perceptions about manufactured homes and their occupants and perceptions about neighborhood characteristics. In turn, these perceptions about manufactured homes are subdivided into perceived manufactured housing physical characteristics (i.e., size, design, appearance, location) and perceived manufactured home occupants' characteristics (i.e., race, gender, socioeconomic status, behavior, appearance). The perceptions about the neighborhood set is subdivided into perceived neighborhood physical structure (i.e., land use, environmental quality) and perceived neighborhood social structure (i.e., social cohesion).

Outcome: Manufactured home acceptance. Outcomes in the theoretical model (figure 3) were based on perceptions held by neighborhood residents about an object (i.e., manufactured housing and its occupants) and not about undertaking a specific behavior. Outcomes are also based on the influence of the external variables: Respondent and county characteristics. People in this model may develop negative or positive attitudes which translate into levels of acceptance or rejection of manufactured

homes. Attitudes thus will be positive or negative evaluations of manufactured homes, their occupants and neighborhood characteristics perceived to lead to particular negative or positive outcomes. In this study, attitudes represented the level of acceptance or rejection of manufactured homes and their occupants in a neighborhood.

Variables Not Included in the Theoretical Model

This study tested only a portion of Dear & Taylor's (1982) model, as adapted by the researcher. The variables from the Dear and Taylor's (1982) model that were not included in the theoretical model are the following:

Behavioral intentions. In the original model (Dear & Taylor, 1982), behavioral intentions indicate when a person has deliberated various alternatives regarding an intended action. Hence, community residents define their position regarding the siting; they either intend to oppose, accept, or ignore the development or object (e.g., intending to speak out or attend a protest). This study did not go beyond the acceptance or rejection level and did not attempt to cover actual behavioral intentions.

Behavior. Behavior refers to taking action. In Dear and Taylor's (1982) model, community residents actually oppose or accept the manufactured homes.

Outcome. The outcome is the actual rejection or acceptance of the proposed development. That is, the development is rejected or approved by the community officials. This construct was excluded from this study's theoretical model because Dear and Taylor's (1982) model fails to include factors which may come into play in the political process that influences the outcome, separate from the NIMBY factors.

Table 2
Variables Included in the Model

CONSTRUCT	VARIABLES	VARIABLE TYPE
Perceived MH Characteristics	Appearance/Conditions Manufactured Homes	Continuous
Perceived MH Household Characteristics	Social behavior	Continuous
Perceived Neighborhood Physical Structure	Physical homogeneity level	Continuous
Perceived Neighborhood Social Structure	Social homogeneity level	Continuous
MH Unit Type	Type of manufactured home	Categorical
Respondents' Socioeconomic Status	Housing Value	Continuous
Respondents' Demographic Characteristics	Gender	Categorical
	Age	Continuous
	Household composition	Continuous
	Race	Categorical
Respondents' Innovativeness	Innovativeness	Continuous
Respondents' Knowledge about MH	Knowledge about MH	Continuous
County Characteristics	Percent (%) existing Manufactured Homes	Continuous
OUTCOME: Neighborhood level of acceptance of MH		Continuous

CHAPTER 3

METHODOLOGY

In this chapter, a description and explanation of the development of the instrument will be presented, followed by the procedures used for data collection, a description of the measures utilized in this study, the methods used for data analysis, and the research hypothesis tested in this study.

Selection and Development of the Instrument

To date there are no known instruments available to measure perceptions and opinions community residents may have about manufactured home characteristics, residents of manufactured homes, and neighborhood suitability for manufactured homes. Although statements about impacts, occupants, and neighborhood fit have been made in the courts, the newspapers, and by groups such as community action organizations, these have not been compiled nor incorporated into any sort of published instrument that measures perceptions and opinions about manufactured homes and their residents.

Measurement of Perceptions

Questions about perceptions were designed to gather community residents opinions about manufactured homes. The instrument developed for this study (see Appendix A) was designed to measure perceptions that were strongly evaluative and salient to help differentiate between persons positively or negatively disposed toward manufactured homes and their occupants.

Perceptions about manufactured homes. The instrument used by Dear, Taylor, and Hall (1980) for measuring mental health facility impacts and the anticipated effects was adapted for this study. In addition, statements found in Nutt-Powell (1982) regarding perceptions about manufactured homes were used. Other items gathered through the review of literature and other means were incorporated as appropriate.

Perceptions about manufactured home occupants. The measurement of perceptions about manufactured housing occupants consisted of questions regarding perceived behavior, household composition, origin, incomes, social status, education, tenure status, employment status, and racial composition. Some statements gathered through the literature review also were used. Questions were constructed based on instruments previously used by researchers of manufactured housing occupants.

Perceived neighborhood characteristics. The researcher created the questions to gather these perceptions about neighborhood physical and social structures.

Measurement of Outcomes

Questions were developed to gather positive and/or negative dispositions of non-manufactured home residents to the acceptance of manufactured housing and their occupants in the neighborhood. Attitudes were assumed to determine overall opinions and acceptance levels of manufactured housing in their neighborhoods. Often attitudes toward an object, action, or event are measured by assessing a person's perceptions or beliefs regarding that object, action, or event. Moreover, standard attitude scaling actually measures the strength of a person's belief or perception in order to infer

attitudes (Fishbein & Ajzen, 1975). Standard attitude measuring methods include the following: Guttman's (1944) cumulative scales, Thurstone's (1931) equal-appearing interval scales, Likert's (1932) summated rating scales, and semantic differential scales (Ary, Jacobs, & Razavieh, 1985; Fishbein & Ajzen, 1975; Miller, 1970; Shaw & Wright, 1967).

In addition, according to Dillman (1978) attitudes are evaluations of an object or behavior which reflect a person's view about the desirability of something. Thus, questions that elicit attitudes indicate the direction of a respondent's evaluation or feeling about the attitude object. For example, questions that elicit levels of acceptance or attitudes included some of the following words: Oppose versus favor, agree versus disagree, prefer versus not prefer, or desirable versus undesirable.

Instrument's Format

The instrument was formatted as a mail questionnaire following the guidelines of Dillman's (1978) Total Design Method. The questionnaire included one picture of the type of manufactured homes in question for respondents to have a reference point (i.e., single-section and double-section models). These pictures served to identify potential variations in respondents opinions and perceptions regarding specific types of manufactured homes.

Pretesting the Instrument

The questionnaire (see Appendix A) was pretested according to the procedures delineated in the Total Design Method (Dillman, 1978). For content validity and

reliability, this questionnaire was reviewed by colleagues (i.e., dissertation committee and other housing educators); by "potential" users of the data with knowledge of manufactured homes (i.e., housing educators); and finally, the researcher surveyed 12 people representative of potential respondents from the population to be surveyed (non-manufactured home residents). The researcher pretested six double-section type questionnaires and six single-section type questionnaires. Of these questionnaires, four were pretested in person, face-to-face with the respondents, and eight were given to respondents to answer at their leisure and return to the researcher within 48 hours.

The pretests took place immediately after the proposal for this study was approved. Given the researcher's location, the pretest with potential respondents took place in Georgia. This facilitated pretesting the instrument face-to-face to gather additional input as recommended by Dillman (1978).

Instrument's Objectives

The instrument served to gather opinions; and then to test this study's hypothesis concerning acceptance of manufactured housing among selected rural areas throughout Virginia. Half the sample was asked to answer questions regarding single-section manufactured homes and the other half was asked to answer questions about double-section manufactured homes.

Instrument Construction and Validation

The construction and validation of the instrument followed this process. The researcher:

- a) Selected and adapted existing instruments;
- b) Composed a pool of opinion statements about manufactured homes and their residents. For these, statements were gathered through relevant literature and newspapers reviews;
- c) Revised available instruments to better fit the topic of manufactured homes and modified wording as needed to effectively communicate statements to the target population. Whenever possible and for the purpose of constructing the questions and creating a strong data analysis, a four point Likert-type scale was used. This helped make some variables interval rather than categorical;
- d) Conducted pretests for reliability and validity of the full instrument (pilot survey). Made revisions according to results from the pre-tests; and
- e) Completed final editing and prepared mailings.

Source of Data

Selected counties in Virginia were the source for data (see Table 1). Samples were obtained from rural counties (non-MSA) and were surveyed for their opinions about manufactured homes and their occupants.

Data about the community locational characteristics were gathered through various sources. For example, political maps of the state of Virginia provided the information needed to locate each selected county in one of the selected four regions

of the state (Southwest, Central, Southside, and the Golden Crescent³) and also determined a degree of closeness to the nearest metropolitan statistical area. The data on the percentage of manufactured homes per county surveyed was gathered through housing information provided by the 1990 Census of Housing and Population.

Data Collection

Individuals randomly chosen from the eight selected counties in Virginia were surveyed about their opinions toward manufactured housing, its occupants, and their neighborhoods. The data gathering technique used was the mail questionnaire (see Appendix A).

Based on the Total Design Method (TDM), the researcher prepared each mailing to include a cover letter on Virginia Tech letterhead, a questionnaire, and a self-addressed stamped return envelope. The cover letter (see Appendix B): (a) briefly described the purpose and importance of the study; (b) stated the importance of the households selected for the sample; (c) requested that the questionnaire be answered by an adult; and (d) assured recipients of complete confidentiality and explained the reasons for any identification numbers. Each cover letter was personally signed with a blue ball point pen to communicate care and confidence to the recipients. The initial mailing was sent on May 1, 1995 to 2,000 addresses in eight rural counties in Virginia. On May 9, 1995, a week after the initial mail out, a

³ The Golden Crescent includes the metropolitan areas from Northern Virginia through Richmond and on to the Norfolk-Virginia Beach-Newport News area.

follow-up/thank-you postcard (see Appendix C) was sent to the entire sample. Exactly three weeks after the initial mailing, on May 23, 1995, a second follow-up letter (see Appendix D) with another questionnaire and self-addressed stamped return envelope was mailed to all non-respondents.

Sample Selection

An analysis of the manufactured housing stock in the state of Virginia revealed a number of counties with very low and with very high percentages of mobile home units as a percentage of total dwelling units. Non-MSA counties from the 95 counties that are part of the State were grouped in four distinctive regions--Southwest, Central, Southside, and the Golden Crescent. Then two counties per region, one with the highest and one with the lowest percentage of mobile homes, were selected from which to obtain the samples. Only non-MSA counties were used (see Table 3).

Table 3
Selected Sample Size per County in Virginia

Region	County	Total # of Occupied Units per County	Proportionate sample (based on 2,000 records)	
			Single wide	Double wide
Central	Bath	1,895	44	44
	Craig	1,676	39	39
Southside	Southhampton	6,009	139	139
	Buckingham	4,341	101	101
Southwest	Pulaski	13,349	309	309
	Buchanan	11,061	256	256
Golden Crescent	Rappahannock	2,496	58	58
	King & Queen	2,339	54	54

This ranking was based on 1990 Census of Population and Housing data on mobile homes as a percent of total occupied units outside metropolitan statistical areas (Bureau of the Census, 1993a; Bureau of the Census, 1993b). This selection considered that the respondents' exposure to the physical presence of occupied and vacant mobile homes could have a significant impact on the development of opinions about this type of housing and its potential impact in the neighborhood. This concept was further explored by the use of questions assessing a respondent's familiarity and knowledge about manufactured housing.

The sampling method used was a proportional random sampling technique including each of the eight counties (see Table 3). A random proportionate sample of all households listed in the white pages of the phone book for each of the chosen counties was surveyed. This selection was influenced by the availability of the sample in the data base kept by the sample surveying company which drew the random sample. The survey sampling agency provided the proportionate sample records according to selected county (based on a total of 2,000 questionnaires to be sent out). A listing of names and addresses was provided by this agency. A total mail list of 2,000 records was arbitrarily selected based on the expectation that only 85% of these records would correspond to the target population (non-mobile home residents) and that there would be a low-response rate of 25%-30% -- half the usual expected response rate using Dillman's (1978) Total Design Method -- to give a total workable sample of 425 to 510 respondents.

Surveys were sent by mail to a total sample of 2000 records (see Appendixes A-D for a draft of the instrument, cover letter, postcard and follow-up letter). Only those respondents who did not reside in a manufactured or mobile home were selected for analysis (respondents were asked to write "MH" in the cover page of the questionnaire and return it blank if they resided in a mobile or manufactured home).

Using samples based only on the records listed in the phone books eliminated the potential participation of certain groups. These groups consisted of households who did not contract telephone services and those who have chosen not to list their

phone numbers. The latter may further include wealthy households which do not list their phone numbers for privacy, or poor households who are not listed because of unstable payment of phone bills. Another disadvantage found with this sample procedure was that a large number of records provided by the sampling agency did not include a full address; particularly those records coming from rural areas. Therefore, in this study, many questionnaires (29.3%) were not delivered to their destination.

Given the above situation, U.S. Postal Service postmasters in each selected community with more than eight potential respondents without complete addresses were contacted via telephone to request delivery of partially addressed surveys. Despite this effort, 587 questionnaires never reached their destination and were returned to the researcher undelivered. From the 1,413 deliverable questionnaires mailed, there were 64 unusable, 66 disqualified, 3 late arrivals, and 552 usable surveys; resulting in a total response rate of 48.5%. Unusable questionnaires included individuals who were deceased or could not read or write. Disqualified questionnaires included those respondents who were manufactured home residents. Late arrivals included 3 usable questionnaires which were received after the analyses for this study were completed, and thus were excluded.

Variables Included in this Study

Dependent Variables

[Y] Outcome: Manufactured home acceptance level.

Independent Variables

Respondents' perceptions.

[X1] Perceived MH characteristics: Appearance of MH;

[X2] Perceived MH household characteristics: Social behavior;

[X3] Perceived neighborhood physical structure: Physical homogeneity level;

[X4] Perceived neighborhood social structure: Social homogeneity level;

Respondents' characteristics.

[X5] Socioeconomic status: Housing value;

[X6] Gender;

[X7] Age;

[X8] Household composition;

[X9] Race

[X10] Innovativeness toward housing

[X11] Degree of knowledge about manufactured housing

County characteristics.

[X12] County's percentage of existing manufactured homes

Manufactured home type.

[X13] Type of manufactured home unit (single- or double-section)

Measurement of Variables

Measurement of variables included in the survey instrument is explained in Appendix E.

Analyses of Data

This study analyzed the relationship among the respondents' perceptions about manufactured homes and their occupants and the characteristics of the county and the respondents. In addition, a relationship between respondents' perceptions about manufactured homes, their occupants and their neighborhoods and the level of acceptance for manufactured homes was established. The hypothesis was tested through the use of multiple regression techniques (Pedhazur, 1982). This study attempted to establish the explanatory power of each of the variables included in the regression equation: $Y' = X1 + X2 + X3 + \dots + X13$.

All data analyses were conducted through the use of the SPSS/PC+ version 4 statistical package for social sciences. Missing values in the regression analyses were handled through the listwise deletion option of SPSS.

Research Hypotheses

There is a significant relationship between *Neighborhood Level of Acceptance for Locating Mobile/Manufactured homes* (Outcome) and:

Perceived Mobile/Manufactured Home Characteristics

- a. Appearance and condition of manufactured homes

Perceived Mobile/Manufactured Home Household Characteristics

- b. Social behavior displayed by manufactured home households

Perceived Neighborhood Physical Structure

- c. Neighborhood physical homogeneity level

Perceived Neighborhood Social Structure

- d. Neighborhood social homogeneity level

Respondent's Socioeconomic Status

- e. Housing value

Respondent's Demographic Characteristics

- f. Gender
- g. Age
- h. Household size and composition
- i. Race

Respondent's Innovativeness

- j. Innovativeness toward housing

Respondent's Knowledge and Familiarity with Manufactured Homes

- k. Extent of knowledge about manufactured homes

County Characteristics

- l. County's percentage (%) of existing manufactured homes.

Manufactured Home Type

- M. Type of manufactured home unit.

The anticipated direction of the relationship between the dependent variable and the independent variables was as follows; high levels of acceptance of manufactured homes would be related to:

- a. Perceptions of good manufactured home appearance and condition
- b. Perceptions of good behavior from the manufactured home occupants
- c. Perceptions of low neighborhood physical homogeneity levels
- d. Perceptions of low neighborhood social homogeneity levels
- e. Respondent's low socioeconomic status
- f-i. Respondents who were young, white, female, in small-sized households
- j. Highly innovative respondents
- k. Respondents with "above average" knowledge of manufactured homes
- l. Counties with high percentage of manufactured homes
- m. Double-section manufactured home unit type.

CHAPTER 4

DESCRIPTION OF SAMPLE

The purpose of this study was to investigate the relationship between the acceptance of two types of manufactured homes and various demographic characteristics and perceptions about manufactured homes and their occupants among non-manufactured home residents in selected rural areas of Virginia. This chapter includes a description of the sample. Results are discussed in Chapter 5. Data analyses were performed through the use of the SPSS/PC+ version 4 statistical package for social sciences.

Sample Description

The sample consisted of 552 individuals who at the time of the survey did not reside in a manufactured home, mobile home, or trailer. This total sample was comprised of two groups of non-manufactured home residents in rural areas of Virginia. One group of subjects consisted of respondents to questions regarding single-section manufactured housing and its occupants and the other group consisted of respondents to questions about double-section manufactured housing and its occupants. Table 4 shows the distribution of respondents by county in Virginia and the type of manufactured home questionnaire per sample group. The single-section subsample group included 274 subjects, while the double-section subsample group consisted of 278 subjects. The following is a description of the demographic and socioeconomic characteristics for the total sample.

Table 4
Frequency Distribution of Respondents by County Name and Survey Type

County Name	Manufactured Home Survey Type					
	Total Sample		Single-Section		Double-section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Bath	22	4.0	9	3.3	13	4.7
Craig	34	6.2	17	6.2	17	6.1
Southhampton	94	17.0	54	19.7	40	14.4
Buckingham	59	10.7	29	10.6	30	10.8
Pulaski	211	38.2	102	37.2	109	39.2
Buchanan	65	11.8	34	12.4	31	11.2
Rappahannock	43	7.8	21	7.7	22	7.9
King & Queen	<u>24</u>	<u>4.3</u>	<u>8</u>	<u>2.9</u>	<u>16</u>	<u>5.8</u>
Total	552	100.0	274	100.0	278	100.0

The total sample size ($N = 552$) represented 1.3% of the total population (i.e., 43,166 occupied units in the eight selected counties). Specifically, the sample obtained represented 1.2% of Bath county, .1% of Buchanan county, 1.4% of Buckingham county, 2.0% of Craig county, 1.0% of King and Queen county, 1.6% of Pulaski county, 1.7% of Rappahannock county, and 1.6% of Southhampton county. Overall, the sample obtained was somewhat similar to the proportionate sample expected, based on 2,000 records (see Table 3, Chapter 3). However, a few counties were underrepresented while others were overrepresented. The most underrepresented county was Buchanan with only 65 usable questionnaires which represented 12.7% of the questionnaires sent to Buchanan residents. Other slightly underrepresented counties were: King and Queen (22.2% of mailed questionnaires) and Bath (25.0% of

mailed questionnaires). The most overrepresented county was Pulaski with 211 questionnaires which represented 34.1% of mailed questionnaires to residents of Pulaski. Other counties which were slightly overrepresented were: Southampton (33.8%), Craig (43.6%), Rappahannock (37.1%), and Buckingham (29.2%).

Comparison of Sample and Total Population

Table 5 shows how the sample obtained resembles the total population in rural areas of Virginia based on data obtained from the 1990 Census of Population (Bureau of the Census, 1993a). According to selected characteristics, the sample obtained is consistent with the overall characteristics of the population. Both the sample and general population had high proportions of white persons, median levels of education above high school, high homeownership rates, similar household composition, similar real estate values, and similar proportion of single-family dwellings.

However, the sample had a slightly higher proportion of white individuals, with higher levels of education and income than the total population in rural Virginia and that of the selected counties combined. Furthermore, the sample's household composition appears to be proportionally higher in family and married couple households. The sample also appeared to have fewer employed individuals, which might suggest that the sample has more retired adults who are generating a relatively high retirement income. This difference between sample and population is not uncommon in mailed surveys in that respondents tend to have more disposable time (such as retirees), above average education, and also higher incomes (Dillman, 1978).

Table 5
Selected Characteristics of Sample Compared to Population

Characteristic	Population	Sample
Race	84.1% white	92.4% white
Household head's gender	83.6% male	61.3% male
Employment	79.6% employed	61.0% employed
Household type	74.0% family household 62.2% married couple families	82.0% family household 73.9% married couple families
Annual median family income	\$29,058	\$35,000 to \$44,999
Homeownership rate	77.1%	88.0%
Dwelling type	75.7% single-detached	94.9% single-detached
Median housing value	\$54,512	\$50,001 to \$100,000
Education level	63.7% high school grad 13.2% bachelor's or higher	83.5% high school grad 24.1% bachelor's or higher

Note. Population data source: 1990 Census of Population and Housing: Summary of social, economic, and housing characteristics, Virginia.

In sum, the sample appears to be better educated, high income, and have more family households than the general population. This might suggest that the sample is biased toward persons presumed to be less accepting of manufactured housing in their neighborhoods. Other research has suggested the typical NIMBY advocate is male of high income, well educated, and married (Yankelovich Group, 1989). The issue of this bias will be, in part, assessed by examining the relationship between respondent characteristics and acceptance of manufactured housing.

Demographic Characteristics of Respondents

Gender. The total sample consisted of both males (61.3%, $n = 332$) and females (38.7%, $n = 210$). The single-section sample group included 168 males (62.4%) and 102 females (37.6%). As shown in Table 6, the double-section sample group consisted of 162 males (60.1%) and 102 females (39.9%).

Race. The majority of the sample consisted of white respondents (92.4%, $n = 497$), while Black/African American respondents represented 5.2% of the sample. Latinos, Native Americans, Asians and Pacific Islanders, and others accounted for 2.4% of the sample. The category "others" included those respondents who did not meet the above classification and those who were racially mixed. The single- and double-section sample groups followed the same pattern of the total sample with a majority of whites that accounted for 93.3% and 91.4% respectively (see Table 6).

Age. The respondents ranged from 21 to 95 years of age. In the total sample, the highest number of respondents were between 36 and 50 years of age (36%). This group was followed closely by respondents 66 years or older (26.8%) and by respondents 51 to 65 years old (25.6%). Consequently, the total sample was divided almost equally between respondents 50 years or younger (47.7%) and respondents older than 50 years (52.4%). A minor and insignificant frequency distribution change was noted when comparing single-section versus double-section sample respondents (see Table 6): The single-section sample had more respondents 51 to 65 years old (25.4%) than respondents older than 65 years of age (23.1%).

Household composition. About 37.2% of all respondents' households were comprised of couples with no children (see Table 6). This was also true for households from the double-section sample group (41.0%) and the single-section sample group (33.5%). Additionally, 29.8% of all respondents belonged to small two-parent households (3 to 4 members); this was also the case for the single-section sample group (32.3%) and the double-section sample group (27.3%).

Table 6
Frequency Distribution of Respondents by Demographic Characteristics

Variable	Manufactured Home Survey Type					
	Total Sample		Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender						
Male	332	61.3	169	62.4	163	60.1
Female	<u>210</u>	<u>38.7</u>	<u>102</u>	<u>37.6</u>	<u>108</u>	<u>39.9</u>
Total	542	100.0	271	100.0	271	100.0
Race						
Black	28	5.2	16	5.9	12	4.5
White	497	92.4	251	93.3	246	91.4
Other	<u>13</u>	<u>2.4</u>	<u>2</u>	<u>0.8</u>	<u>11</u>	<u>4.2</u>
Total	538	100.0	269	100.0	269	100.0
Age (years)						
35 or less	61	11.6	31	11.6	30	11.6
36 to 50	190	36.1	107	30.9	83	32.0
51 to 65	135	25.6	68	25.4	67	25.9
66 or more	<u>141</u>	<u>26.8</u>	<u>62</u>	<u>23.1</u>	<u>79</u>	<u>30.5</u>
Total	527	100.0	268	100.0	259	100.0
Household Composition						
Singles	97	18.0	49	18.2	48	17.7
Couples	201	37.2	90	33.5	111	41.0
Small SPF	38	7.0	20	7.4	18	6.6
Small TPF	161	29.8	87	32.3	74	27.3
Large SPF	6	1.1	5	1.9	1	0.4
Large TPF	<u>37</u>	<u>6.9</u>	<u>18</u>	<u>6.7</u>	<u>19</u>	<u>7.0</u>
Total	540	100.0	269	100.0	271	100.0

Note. Other = Latinos, Native Americans, Asian/Pacific Islander, and Mixed race; Small = 2 to 4 members; Large = 5 or more members; SPF = Single-parent family; TPF = Two-parent family.

Socioeconomic and Housing Characteristics of Respondents

Income. A total 508 respondents (92.0%) reported total annual household income. Of these, 37.8 % reported having incomes at or above \$45,000; 30.9% had incomes between \$25,000 and \$44,999; and 31.3 % had incomes below \$25,000. Table 7 shows the reported incomes of all respondents according to sample group. Both the single- and double-section sample groups reported similar income distributions.

Educational level. Responses to this question in the survey ranged from "none/some grade school" to "graduate/professional degree" (see Table 7). The highest percentage (23.0%) of the respondents were high school or GED graduates. In addition, 19.0% of all respondents had some college or vocational education beyond high school but had not completed a degree. A similar frequency distribution was obtained from single- and double-section survey respondents.

Employment status. Over half of all respondents (55.8%) indicated that they were fully employed. Additionally, 30.2% of the sample were retired from the work force. Of 543 respondents, only 7.7% were homemakers, 0.2% were students, and 0.9% were unemployed and not retired (see Table 7). Again, single- and double-section survey respondents followed a similar distribution.

Housing type. As shown in Table 7, the housing type characteristics of the sample were very homogeneous. Furthermore, 94.5% of all respondents lived in a single-family house and only 5.4% lived in apartments, townhouses, duplexes, or

other forms of dwellings. Both single- and double-section sample groups had a majority of respondents residing in single-family houses (94.9% and 94.2%, respectively).

Housing tenure status. As shown in Table 7, the majority of the respondents (88.0%) were homeowners while only 8.6% were renters. Additionally, 89.4% of all single-section and 86.5% of all double-section survey respondents were homeowners.

Housing value. Of the 538 respondents to this question, 45.0% homeowners believed that their homes were valued between \$50,001 and \$100,000 dollars. In addition, 31.9% of the sample indicated house values above \$100,000 dollars. The subsamples also showed a similar distribution for housing values (see Table 7).

Table 7

Frequency Distribution of Respondents by Socioeconomic Characteristics

Variable	Manufactured Home Survey Type					
	Total Sample		Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Income (\$)						
Less than 5,000	18	3.5	9	3.5	9	3.6
5,000-14,999	60	11.8	30	11.7	30	11.9
15,000-19,999	35	6.9	16	6.3	19	7.5
20,000-24,999	46	9.1	16	6.3	30	11.9
25,000-34,999	84	16.5	39	15.2	45	17.9
35,000-44,999	73	14.4	42	16.4	31	12.3
45,000 or more	<u>192</u>	<u>37.8</u>	<u>104</u>	<u>40.6</u>	<u>88</u>	<u>34.9</u>
Total	508	100.0	256	100.0	252	100.0
Educational Level						
Grade School	35	6.5	15	5.6	20	7.5
Some High School	53	9.9	22	8.1	31	11.6
High School/GED	124	23.0	58	21.5	66	24.6
Some College	103	19.1	57	21.1	46	17.2
Vocational	33	6.1	21	7.8	12	4.5
2-year College	55	10.2	31	11.5	24	9.0
4-year College	76	14.1	40	14.8	36	13.4
Graduate Degree	<u>59</u>	<u>11.0</u>	<u>26</u>	<u>9.6</u>	<u>33</u>	<u>12.3</u>
Total	538	100.0	270	100.0	268	100.0
Employment status						
Full-time	303	55.8	159	58.7	144	52.9
Part-time	28	5.2	13	4.8	15	5.5
Retired	164	30.2	75	27.7	89	32.7
Homemaker	42	7.7	20	7.4	22	8.1
Unemployed	5	0.9	3	1.1	2	0.7
Student	<u>1</u>	<u>0.2</u>	<u>1</u>	<u>0.4</u>	<u>0</u>	<u>0.0</u>
Total	543	100.0	271	100.0	272	100.0

Table 7 (Continued)
Frequency Distribution of Respondents by Socioeconomic Characteristics.

Variable	Total Sample		Manufactured Home Survey Type			
			Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Housing Type						
House	519	94.5	259	94.9	260	94.2
Apartment	20	3.6	10	3.7	10	3.6
Town House/Duplex	5	0.9	2	0.7	3	1.1
Other	<u>5</u>	<u>0.9</u>	<u>2</u>	<u>0.7</u>	<u>3</u>	<u>1.1</u>
Total	549	100.0	273	100.0	276	100.0
Housing Tenure						
Own	481	88.0	243	89.4	238	86.5
Rent	47	8.6	18	6.6	29	10.5
Other	<u>19</u>	<u>3.5</u>	<u>11</u>	<u>4.0</u>	<u>8</u>	<u>2.9</u>
Total	547	100.0	272	100.0	275	100.0
Housing Value (\$)						
Less than 50,000	74	13.8	40	14.9	34	12.6
50,001-100,000	242	45.0	122	45.4	120	44.6
100,001-150,000	96	17.8	52	19.3	44	16.4
150,001-above	76	14.1	34	12.6	42	15.6
Does Not Apply	<u>50</u>	<u>9.3</u>	<u>31</u>	<u>7.8</u>	<u>29</u>	<u>10.8</u>
Total	538	100.0	269	100.0	269	100.0

Note. GED = Graduate equivalency degree; Does not apply = Respondents who were not homeowners.

Respondents' Innovativeness

Personal innovativeness. Innovativeness scores were calculated for the total sample ($N = 552$); however, a total of 102 cases did not complete the scale, thus leaving a sample size of 450 cases. Individual innovativeness scores were obtained by adding responses to the 26-item scale. The resulting innovativeness scores ranged from 36 to 93 points. Mean scores for the total sample indicated a relatively high ($M = 70.45$, $SD = 7.07$) level of innovativeness. Furthermore, a t test for independent samples indicated that mean scores between single- ($n = 228$, $M = 71.30$, $SD = 7.354$) and double-section ($n = 222$, $M = 69.59$, $SD = 6.67$) survey subsamples were significantly different ($t = 2.59$, $p = .010$). Thus, it appears respondents to the single-section survey were more innovative than respondents to the double-section survey.

The innovativeness scale used in this study was further analyzed through the use of factor analysis performed with SPSS/PC+ v.4. The purpose of this factor analysis was to compare this innovativeness scale to the innovativeness scales used by Gruber et al. (1990) and Kwon (1991). Using a principal-component analysis for factor extraction (i.e., extracted only factors with Eigen values above 1.0), a Varimax rotation, and a missing value substitution by the mean of each variable, the researcher obtained five factors. These five factors explained 52.5% of the total variance for the innovativeness scale (see Table 8). The factors obtained were named as follows: Factor I - "Chance taking," explained 21.8% of the variance (*Eigen value* = 5.669);

Factor II - "New housing types," explained 11.7 % of the variance (*Eigen value* = 3.050); Factor III - "Home improvement," explained 8.6% of the variance (*Eigen value* = 2.247); Factor IV - "Housing designs and ideas," explained 5.5% of the variance (*Eigen value* = 1.430); and Factor V - "Appearance versus comfort," explained 4.5% of the variance (*Eigen value* = 1.177).

The researcher also conducted a Kaiser-Meyer-Olkin (KMO) test to measure the sampling adequacy of the factor analysis. The resulting test yielded a *KMO* = .862, which indicated a "good" sampling adequacy level. Additionally, the Bartlett Test of Sphericity indicated that the data did not differ significantly from a normal distribution (*Bartlett's test* = 3938.356, $p < .00000$). Results from the factor analysis were consistent with previous studies by Gruber et al. (1990) and Kwon (1991).

The factors obtained relate to the overall scale for innovativeness in the following manner: Factor I - "Chance taking," which explained the highest percentage of the scale's variance, indicated how the most innovative respondents showed a willingness to take risks and experiment with new things. Factor II - "New housing types," indicated a positive attitude or tendency to embrace new, uncommon or extraordinary housing products, units, and technology. Therefore, this factor could serve to explain the level of innovativeness associated with non-standard types of housing such as manufactured homes.

Factor III - "Home improvement" showed how respondents can be more innovative when they like to repair and fix things themselves or are curious about how

things work. Factor IV - "Housing designs and ideas," explained a willingness to be knowledgeable about new housing ideas and products and also a tendency to accept housing that is a little different. Finally, Factor V - "Appearance versus comfort," indicated the respondents' interest in comfort, appearance, and heating of the house.

These five factors highlighted the type of respondents' personality traits necessary to explain just over half of the variance of the innovativeness scale. Consequently, it is hypothesized that respondents who scored high in the each of the variables that compose each of the above related factors will be among those who are considered to be highly innovative toward housing types, ideas, or products.

The researcher conducted the factor analysis only to compare the results of the innovativeness scale used in this study with those of the innovativeness scales used in previous studies. It was not the goal of this study to use the innovativeness factors in the subsequent regression analyses to predict acceptance of manufactured homes. Only individual innovativeness scores were used for that purpose.

Table 8

Factor Pattern of the Innovativeness Towards Housing Scale for the Total Sample

Identification	Variance Explained	Factor Loading
Total Variance Explained = 52.2%		
Factor I - Chance Taking	(21.8%)	
INV03 Take chances		.76
INV02 Experiment with new ways of doing things		.76
INV11 Try new and different things		.67
INV06 Fool around with new ideas even if a waste of time		.61
INV10 New ideas are not a waste of time		.47
Factor II - New Housing Types	(11.7%)	
INV14 Buying a house type not widely available is not a mistake		.69
INV09 Builders do not waste time creating new housing types		.64
INV07 Risk taking		.59
INV24 Only enjoy product if used at full capacity		.58
INV15 Don't mind house which requires new ways of doing things		.56
INV01 Unusual home not waste of money		.44
INV25 Always possible improve house by adding new features		.41
Factor III - Home Improvement	(8.6%)	
INV22 Like to make repairs myself		.82
INV21 Like to fix things around house		.78
INV19 Like to build things for my home		.76
INV20 Like to take things apart		.58
INV18 Very curious about how things work		.44
Factor IV - Housing Design & Ideas	(5.5%)	
INV04 Enjoy looking at new housing designs in magazines		.72
INV13 Often try to find out more about new housing types		.70
INV05 Some contemporary housing is stimulating		.69
INV26 Keep up with new products/ideas to improve my home		.59
INV12 Like housing that is a little different		.50
Factor V - Appearance versus Comfort	(4.5%)	
INV23 Outside appearance of house is important		-.72
INV16 More interested in comfort than appearance of a house		-.56
INV17 Interested in how heating system in house works		.53
INV08 Changing technology in housing is not a waste of money		.50

Respondents' Knowledge about Manufactured Homes

Respondents were asked to indicate how close they lived to manufactured homes, if they ever lived in one of these units, or if they knew someone living in one. They were asked if they had ever visited a manufactured home and if so, how long ago that visit occurred and the perceived condition of the dwelling. Respondents also indicated how knowledgeable they were regarding single- or double-section units. Table 9 includes the following distributions.

Closeness to manufactured homes. Results showed that 47.2% of 544 respondents indicated that they lived very close to manufactured homes. Additionally, there were no significant differences between the single- and the double-section subsamples in terms of their relative proximity to either single- or double-section manufactured home units.

Previous residency in a manufactured home. From 547 respondents, 23.2% had lived in either a single- or a double-section mobile or manufactured home. However, there were important differences between the single- and the double-section subsamples. Only 9.8% of double-section sample respondents had lived in a double-section manufactured home. In contrast, more single-section sample respondents had lived in a single-section manufactured home (36.8%).

Knowledge of a manufactured home resident. In terms of knowing someone living in a single- or double-section manufactured home, 87.7% of 546 respondents indicated that they knew such a person. However, 91.2% of single-section sample

respondents knew someone living in a single-section home and 84.3% double-section sample respondents knew someone living in a double-section home.

Visit to a manufactured home. Likewise, more single-section sample respondents (92.7%) had visited a single-section manufactured home than double-section sample respondents (85.7%) had visited a double-section manufactured home.

Time of visit to a manufactured home. There were important differences between the subsamples because, on average, the single-section survey respondents had visited single-section homes more recently ($M = 9.01$ years, $SD = 25.07$) than the double-section survey respondents had visited double-section homes ($M = 15.37$ years, $SD = 33.80$). Additionally, in the total sample, many of those who visited a single- or a double-section home (48.3%) did so less than a year before this study.

Condition of manufactured homes visited. The condition of the single- and double-section units that were visited by the sample respondents ($N = 544$) mostly ranged from "OK" (22.1%) to "good" (31.4%) to "very good" (29.6%). However, most of the single-section subsample (63.0%) rated the single-section units visited as "OK" (31.5%) to "good" (31.5%), while the double-section subsample (70.1%) believed that the double-section units visited were in "good" (31.4%) to "very good" (38.7%) condition. More single-section survey respondents (9.7%) believed that the single-section units were in "very bad" to "bad" condition than did the double-section survey respondents (3.3%) when indicating the condition of the double-section units.

Knowledge about manufactured housing. Finally, 29.2% of 544 respondents indicated that they had "average" knowledge about either single- or the double-section units. The subsamples differed in that many double-section survey respondents noted that they had "average to little knowledge" about double-section units and that many single-section survey respondents were closer to being "somewhat knowledgeable" about single-section units. This finding suggested that double-section survey respondents believed they were less knowledgeable about double-section units than single-section survey respondents believed they were about single-section units.

Table 9

Frequency Distribution of Respondents by Manufactured Home Knowledge

Variable	Total Sample		Manufactured Home Survey Type			
			Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Proximity to MH						
Very Close	257	47.2	134	49.3	123	45.2
Close	163	30.0	83	30.5	80	29.4
Not Close/Not Far	67	12.3	26	9.6	41	15.1
Far	24	4.4	14	5.1	10	3.7
Very Far	8	1.5	5	1.8	3	1.1
Do Not Know	<u>25</u>	<u>4.6</u>	<u>10</u>	<u>3.7</u>	<u>15</u>	<u>5.5</u>
Total	544	100.0	272	100.0	272	100.0
Previous MH Residency						
No	420	76.8	172	63.2	248	90.2
Yes	<u>127</u>	<u>23.2</u>	<u>100</u>	<u>36.8</u>	<u>27</u>	<u>9.8</u>
Total	547	100.0	272	100.0	275	100.0
Knowledge of MH Person						
No	67	12.3	24	8.8	43	15.7
Yes	<u>478</u>	<u>87.7</u>	<u>248</u>	<u>91.2</u>	<u>231</u>	<u>84.3</u>
Total	546	100.0	272	100.0	274	100.0
Previous Visit to MH						
No	61	11.1	20	7.3	41	14.9
Yes	<u>487</u>	<u>88.5</u>	<u>253</u>	<u>92.7</u>	<u>234</u>	<u>85.7</u>
Total	548	100.0	273	100.0	275	100.0

Table 9 (Continued)

Frequency Distribution of Respondents by Manufactured Home Knowledge

Variable	Total Sample		Manufactured Home Survey Type			
			Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Condition MH Visited						
Very Bad	9	1.7	5	1.9	4	1.5
Bad	26	4.8	21	7.8	5	1.8
OK	120	22.1	85	31.5	35	12.8
Good	171	31.4	85	31.5	86	31.4
Very Good	161	29.6	55	20.4	106	38.7
Does Not Apply	<u>57</u>	<u>11.0</u>	<u>19</u>	<u>7.0</u>	<u>38</u>	<u>13.9</u>
Total	546	100.0	270	100.0	274	100.0
Knowledge about MH						
Very Knowledgeable	66	12.1	42	15.6	24	2.8
Some Knowledge	141	25.9	76	28.1	65	23.7
Average Knowledge	159	29.2	77	28.5	82	29.9
Little Knowledge	113	20.8	46	17.0	67	24.5
No Knowledge	<u>65</u>	<u>11.8</u>	<u>29</u>	<u>10.7</u>	<u>36</u>	<u>13.1</u>
Total	544	100.0	270	100.0	274	100.0

Note. MH = Manufactured home; Does not apply = Respondents who had not visited a MH.

Perceived Neighborhood Characteristics of Respondents

Table 10 illustrates the distribution of frequencies for the samples in terms of the respondent's perceptions regarding their immediate environment.

Neighborhood physical homogeneity. Of the 536 respondents, 53% agreed that their neighborhoods had houses with similar physical characteristics. Similarly, 53.9% of the single- and 52.1% of the double-section survey subsamples agreed with the above statement.

Neighborhood social homogeneity. Of the 536 respondents, 58.4% agreed that their neighborhoods had a majority of residents with similar social characteristics. Likewise, 59.9% of the single- and 56.9% of the double-section survey subsamples agree with the above statement.

Neighborhood composition. Most respondents (73.8%) indicated that their neighborhoods were mostly composed of single-family houses, while 16.2% of the respondents noted that their neighborhoods were composed mostly of a mixture of houses and mobile homes.

Neighborhood location. A majority of respondents from the total sample and the single- and double-section survey subsamples indicated that their neighborhoods were located "out in the country."

Community size. Of the total sample, 247 respondents (46.1%) agreed that their community or town had less than 1,000 people. Similarly, 45.7% of the single- and 46.4% of the double-section survey subsamples agreed with the above statement.

Neighborhood belonging. Of the total sample, 175 respondents (31.9%) indicated that they had lived in their neighborhoods for over 30 years. A similar distribution was obtained for the single- (31.5%) and the double-section (32.4%) subsamples.

Closeness to manufactured homes. Again, the largest proportion of respondents indicated that they lived "very close" to either single- (49.3%) or double-section (45.2%) manufactured homes (also see Table 10).

Table 10
Frequency Distribution of Respondents by Perceived Situational Characteristics

Variable	Total Sample		Manufactured Home Survey Type			
			Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Physical Homogeneity						
Strongly Agree	42	7.8	26	9.7	16	6.0
Agree	284	53.0	145	53.9	139	52.1
Disagree	186	34.7	91	33.8	95	35.6
Strongly Disagree	<u>24</u>	<u>4.5</u>	<u>7</u>	<u>2.6</u>	<u>17</u>	<u>6.4</u>
Total	536	100.0	269	100.0	267	100.0
Social Homogeneity						
Strongly Agree	55	10.3	30	11.2	25	9.4
Agree	313	58.4	161	59.9	152	56.9
Disagree	143	26.7	66	24.5	77	28.8
Strongly Disagree	<u>25</u>	<u>4.7</u>	<u>12</u>	<u>4.5</u>	<u>13</u>	<u>4.9</u>
Total	536	100.0	269	100.0	267	100.0
Neighborhood Composition						
Houses	401	73.8	204	75.3	197	72.4
Apartments	8	1.5	5	1.8	3	1.1
Mobile homes	7	1.3	4	1.5	3	1.1
Houses/mobile home	88	16.2	40	14.8	48	17.6
All housing types	<u>39</u>	<u>7.2</u>	<u>18</u>	<u>6.6</u>	<u>21</u>	<u>7.7</u>
Total	543	100.0	271	100.0	272	100.0
Neighborhood Location						
Within town limits	99	18.1	47	17.2	52	18.9
Right outside town	126	23.0	67	24.5	59	21.5
Out in the county	<u>323</u>	<u>58.9</u>	<u>159</u>	<u>58.2</u>	<u>164</u>	<u>59.6</u>
Total	548	100.0	273	100.0	275	100.0

Table 10 (Continued)
Frequency Distribution of Respondents by Perceived Situational Characteristics

Variable	Total Sample		Manufactured Home Survey Type			
			Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Community Size (People)						
Less than 1,000	247	46.1	123	45.7	124	46.4
1,000 to 10,000	188	35.1	103	38.3	85	31.8
10,001 to 20,000	81	15.1	30	11.2	51	19.1
20,001 to 50,000	17	3.2	11	4.1	6	2.2
More than 50,000	<u>3</u>	<u>.6</u>	<u>2</u>	<u>.7</u>	<u>1</u>	<u>.4</u>
Total	536	100.0	269	100.0	267	100.0
Neighborhood Belonging						
Less than 1 year	5	.9	2	.7	3	1.1
1 to 5 years	83	15.1	36	13.2	47	17.1
6 to 10 years	79	14.4	46	16.8	33	12.0
11 to 20 years	114	20.8	63	23.1	51	18.5
21 to 30 years	92	16.8	40	14.7	52	18.9
More than 30 years	<u>175</u>	<u>31.9</u>	<u>86</u>	<u>31.5</u>	<u>89</u>	<u>32.4</u>
Total	548	100.0	273	100.0	275	100.0

Note. MH = Manufactured home.

Perceived Manufactured Home Characteristics

Foundation type. Of the total sample, 273 respondents (49.5%) were aware that manufactured homes were placed on block foundations and may also be skirted. In this category, the proportion of single-section sample respondents (67.1%) was higher than that of double-section survey respondents (40.5%) (see Table 11). Therefore, it appears that more double-section units were perceived to be placed on permanent foundations than single-section units were.

Appearance and condition. Of the total sample, 260 respondents (47.9%) indicated that the manufactured homes in their counties were in "good" condition. Additionally, 54.9% of the single-section subsample rated the single-section units in their county to be in "OK" condition. An additional 23.8% rated them in "good" condition. In contrast, the double-section subsample believed the double-section units in their counties were in "very good" (41.1%) to "good" (40.7%) condition. This suggested an important difference between the subsamples.

Neighborhood type. An important difference regarding neighborhood type was noted between single- and double-section survey respondents. In fact, 67.4% of single-section survey respondents perceived that single-section units were mostly located in mobile home parks. In contrast, 41.4% of double-section survey respondents perceived that most double-section units were located in residential neighborhoods.

Age of structure. An important difference was noted between the single- and the double-section survey respondents. In fact, 54.2% of single-section survey respondents indicated that single-section units in their counties were around 10 years old. However, 40.1% of the double-section subsample noted that most double-section units in their counties were new or no more than 5 years old.

Table 11
Frequency Distribution of Respondents by Perceived Manufactured Home Characteristics

Variable	Manufactured Home Survey Type					
	Total Sample		Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Foundation Type						
Provisional	23	4.5	16	6.3	7	2.8
Blocks/Skirted	273	53.8	171	67.1	102	40.5
Permanent	129	25.4	36	14.1	93	36.9
Do not know	<u>82</u>	<u>16.2</u>	<u>32</u>	<u>12.5</u>	<u>50</u>	<u>19.8</u>
Total	507	100.0	255	100.0	252	100.0
Appearance/Condition						
Very Bad	14	2.6	7	2.6	7	2.6
Bad	62	11.4	41	15.0	21	7.8
OK	260	47.9	150	54.9	110	40.7
Good	176	32.4	65	23.8	111	41.1
Very Good	<u>31</u>	<u>5.7</u>	<u>10</u>	<u>3.7</u>	<u>21</u>	<u>7.8</u>
Total	543	100.0	273	100.0	270	100.0
Neighborhood Type						
Mobile Home Parks	236	44.5	178	67.4	58	21.8
MH Subdivisions	35	6.6	14	5.3	21	7.9
Res. Neighborhoods	155	29.2	45	17.0	110	41.4
Farmland	<u>104</u>	<u>19.6</u>	<u>27</u>	<u>10.2</u>	<u>77</u>	<u>28.9</u>
Total	530	100.0	264	100.0	266	100.0
Perceived MH Age						
Older than 20 years	51	9.4	37	13.7	14	5.1
About 10 years old	231	42.4	147	54.2	84	30.7
New or 5 years old	135	24.8	25	9.2	110	40.1
Do not know	<u>128</u>	<u>23.5</u>	<u>62</u>	<u>22.9</u>	<u>66</u>	<u>24.1</u>
Total	545	100.0	271	100.0	274	100.0

Note. MH = Manufactured home.

Perceived Manufactured Home Occupants' Characteristics

Occupants' origin. Most respondents (68.9%) indicated that most manufactured home occupants were local people and not outsiders. Similar frequencies were obtained for the single-section survey respondents (69.7%) and the double-section survey respondents (68.0%). See Table 12.

Household composition. Most respondents (60.7%) believed that most manufactured home households were comprised of small two-parent families. No important differences were noted in the answers from the single-section survey respondents (57.6%) and the double-section survey respondents (63.7%).

Social behavior. An important difference was noted between perceived social behavior of single- and double-section home occupants. Single-section survey respondents indicated that most single-section manufactured home occupants displayed "OK" behavior. In contrast, double-section survey respondents noted that most double-section unit occupants displayed a behavior closer to "good".

Tenure status. An important difference was observed between the single- and the double-section survey responses about tenure status of manufactured home occupants. Most single-section survey respondents indicated that single-section manufactured home occupants owned the units but rented the land. In contrast, the double-section subsample noted that most double-section manufactured home occupants owned the units and the land.

Racial composition. Most respondents (79.0%) agreed that the majority of single- and double-section manufactured home occupants were White or Caucasian. No important differences between the subsamples were noted.

Socioeconomic status. An important difference was observed between the single- and the double-section survey responses about the socioeconomic status of manufactured home households. Single-section survey respondents indicated that single-section unit occupants were mostly "low income". Conversely, double-section survey respondents noted that most double-section unit occupants were closer to being "middle class."

Educational level. An important difference was noted between the single- and the double-section survey responses about educational levels of manufactured home occupants. Although over half of the respondents (54.8%) noted that most manufactured home occupants have a high school or GED diploma, single-section survey respondents indicated that single-section unit occupants do not finish high school. In contrast, double-section survey respondents noted that most double-section unit occupants complete high school or get a GED.

Employment status. A majority (82.7%) of the 522 respondents indicated that most manufactured home heads of households were in full-time jobs or at least in two part-time jobs. No important differences were noted between subsamples.

Table 12

Frequency Distribution of Perceived Manufactured Home Occupants' Characteristics

Variable	Manufactured Home Survey Type					
	Total Sample		Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Occupants' Origin						
Local People	376	68.9	189	69.7	187	68.0
Outsiders	59	10.8	31	11.4	28	10.2
Do not Know	<u>111</u>	<u>20.3</u>	<u>51</u>	<u>18.8</u>	<u>60</u>	<u>21.8</u>
Total	546	100.0	271	100.0	275	100.0
Household Composition						
Singles	8	1.5	5	1.9	3	1.2
Couples/no children	46	8.8	23	8.8	23	8.9
Small SPF	123	23.6	69	26.3	54	20.8
Small TPF	316	60.7	151	57.6	165	63.7
Large SPF	15	2.9	6	2.3	9	3.5
Large TPF	<u>13</u>	<u>2.5</u>	<u>8</u>	<u>3.1</u>	<u>5</u>	<u>1.9</u>
Total	521	100.0	262	100.0	259	100.0
Social Behavior						
Very Bad	14	2.6	10	3.7	4	1.5
Bad	58	10.8	32	12.0	26	9.7
OK	283	52.9	160	59.9	123	45.9
Good	157	29.3	55	20.6	102	38.1
Very Good	<u>23</u>	<u>4.3</u>	<u>10</u>	<u>3.7</u>	<u>13</u>	<u>4.9</u>
Total	535	100.0	267	100.0	260	100.0
Tenure Status						
Own home & land	256	49.2	67	25.2	189	74.4
Rent home & land	102	19.6	71	26.7	31	12.2
Own home/rent land	<u>162</u>	<u>31.2</u>	<u>128</u>	<u>48.1</u>	<u>34</u>	<u>13.4</u>
Total	520	100.0	266	100.0	254	100.0

Note. Small = 2 to 4 members; Large = 5 or more members; SPF = Single-parent family; TPF = Two-parent family.

Table 12 (Continued)
Frequency Distribution of Perceived Manufactured Home Occupants' Characteristics

Variable	Manufactured Home Survey Type					
	Total Sample		Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Racial Composition						
Blacks	48	9.3	24	9.3	24	9.3
Whites	407	79.0	212	82.2	195	75.9
Other	<u>60</u>	<u>11.7</u>	<u>22</u>	<u>8.5</u>	<u>38</u>	<u>14.8</u>
Total	515	100.0	258	100.0	257	100.0
Socioeconomic Status						
Rich/Well Off	2	.4	1	.4	1	.4
Middle Class	179	33.6	50	18.7	129	48.7
Low Income	320	60.2	197	73.8	123	46.4
Poor	<u>31</u>	<u>5.8</u>	<u>19</u>	<u>7.1</u>	<u>12</u>	<u>4.5</u>
Total	532	100.0	267	100.0	265	100.0
Educational Level						
None/grade school	18	3.6	6	2.4	12	4.8
Some High School	145	28.9	95	37.7	50	20.0
High School/GED	275	54.8	131	52.0	144	57.6
Some College	46	9.2	16	6.3	30	12.0
Vocational	12	2.4	2	.8	10	4.0
2-year College	5	1.0	2	.8	3	1.2
4-year College	<u>1</u>	<u>.2</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>.4</u>
Total	502	100.0	252	100.0	250	100.0
Employment status						
Full-time	430	82.7	205	79.2	225	86.2
Part-time	57	11.0	38	14.7	19	7.3
Retired	12	2.3	7	2.7	5	1.9
Homemaker	9	1.7	2	.8	7	2.7
Unemployed	11	2.1	6	2.3	5	1.9
Student	<u>1</u>	<u>.2</u>	<u>1</u>	<u>.4</u>	<u>0</u>	<u>0</u>
Total	520	100.0	259	100.0	261	100.0

Note. GED = Graduate equivalency degree; Other = Latinos, Native Americans, Asian/Pacific Islander, and Mixed race.

Perceived Manufactured Housing Impacts on the Neighborhood

Perceived impact. Perceived manufactured housing impacts were obtained for 13 characteristics. A single scale was created by adding the mean scores for each of the 13 individual characteristics. Overall, most respondents agreed that the placement of single- or double-section manufactured homes would have a negative impact upon their neighborhoods ($M = 24.85$, $SD = 5.35$, $N = 461$). However, an important difference was noted between the single- and the double-section survey respondents. After adding the average mean scores for all 13 characteristics, the placement of single-section units in a neighborhood was perceived more negatively ($M = 23.61$, $SD = 4.98$, $N = 231$) than the placement of double-section units ($M = 26.10$, $SD = 5.43$, $N = 230$). Higher means were associated with less negative impacts.

Table 13 shows the variables which comprised the perceived impacts scale used in this study. The mean scores for each variable indicate the direction of agreement or disagreement with the statements about potential impacts on the neighborhood. On average, respondents disagreed with the idea that the placement of manufactured housing in their neighborhoods would provide higher neighborhood satisfaction, create a better social image, increase the quality of the neighborhood, create a stronger neighborhood character, and make the neighborhood more attractive. Respondents also indicated on average that they disagreed to strongly disagreed with the suggestion that their property values would increase if manufactured homes were placed in their neighborhoods.

Table 13
Mean Scores for Perceived Manufactured Housing Impacts in the Neighborhood

Variable Name	<i>M</i>	<i>SD</i>	<i>N</i>
Increase property values	3.11	.67	530
Increase traffic	2.29	.68	531
Increase neighborhood satisfaction	3.06	.69	517
Move out and sell home	2.46	.77	524
Create a better social image	3.09	.62	523
Create more noise	2.30	.73	527
Better neighborhood quality	3.10	.61	526
Stronger neighborhood character	3.00	.66	519
Attract undesirables	2.90	.69	511
Create a safer living environment	2.91	.67	510
Lower property taxes	2.82	.70	511
A more attractive neighborhood	3.00	.69	517
Good social & physical fit	2.91	.77	528

Note. Measurement of variables ranged as follows: 1 = strongly agree, 2 = agree, 3 = disagree, and 4 = strongly disagree.

Finally, on average, respondents remained neutral with regard to the potential impact of manufactured housing in terms of several characteristics. These were: increased traffic and noise levels, safer environment, low property taxes, attraction of undesirables, neighbors moving out and selling their houses, and manufactured home units fitting the social and physical character of the neighborhood.

Respondents' Acceptance of Manufactured Homes in their Neighborhoods

Acceptance level. Acceptance of manufactured homes is the dependent variable of this study. About 39.4% of the respondents neither opposed nor favored the location of manufactured housing in their neighborhoods. Likewise, 44.6% of the

double-section survey respondents neither opposed nor favored the location of double-section manufactured homes in their neighborhoods. In contrast, 37.9% of the single-section survey respondents strongly opposed the location of single-section manufactured homes in their neighborhoods (see Table 14). Consequently, there were important differences between the subsamples in terms of their acceptance levels. In fact, their means indicated that single-section survey respondents were more likely to mildly oppose the location of single-section units ($M = 2.19$, $SD = 1.12$, $N = 272$) and double-section survey respondents were more likely to be neutral toward the location of double-section units ($M = 2.68$, $SD = 1.19$, $N = 269$). Similarly, in the entire sample, females ($M = 2.63$, $SD = 1.19$, $N = 207$) were more accepting of either type of manufactured homes while males ($M = 2.32$, $SD = 1.17$, $N = 330$) were less accepting ($t = -3.01$, $p = .003$).

Table 14
Frequency Distribution of Respondents by Acceptance Levels

Acceptance	Total Sample		Manufactured Home Survey Type			
			Single-Section		Double-Section	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Strongly oppose	164	30.3	103	37.9	61	22.7
Mildly oppose	88	16.3	50	18.4	38	14.1
Neither oppose nor favor	213	39.4	93	34.2	120	44.6
Mildly favor	40	7.4	15	5.5	25	9.3
Strongly favor	<u>36</u>	<u>6.7</u>	<u>11</u>	<u>4.0</u>	<u>25</u>	<u>9.3</u>
Total	541	100.0	272	100.0	269	100.0

MH ACCEPTANCE LEVELS BY UNIT TYPE

Selected Rural Counties in Virginia

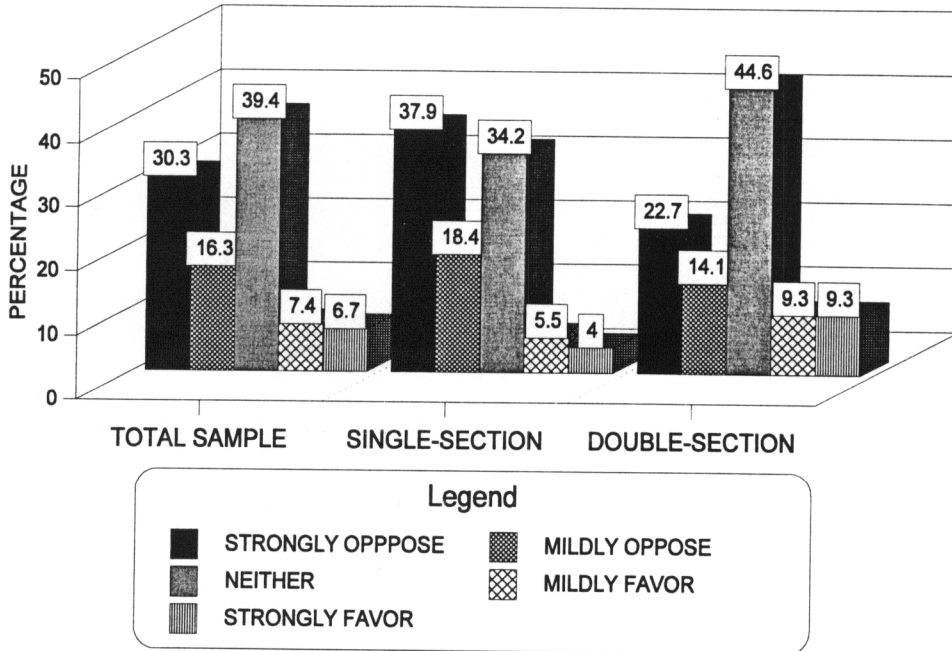


Figure 4. Acceptance of Manufactured Homes by Type of Manufactured Home.

Characteristics of Opponents to Manufactured Homes

Opponents. Opponents were defined as those respondents who indicated they would mildly or strongly oppose the placement of either single- or double-section manufactured homes in their neighborhoods ($N = 252$). Most opponents were found to be White (93.9%), mostly mature in age (an average of 53 years of age), male (68%), high school or GED graduates with some vocational training, in full-time occupations (61.4%) or retired (26.9%), mostly married with no children, and with household incomes between \$30,000 and \$45,000 dollars.

Furthermore, most opponents were owners (90.0%) of mostly less than \$150,000 houses, lived close or very close to manufactured homes (69.8%), resided in relatively socially- and physically-homogeneous neighborhoods outside town limits or in the country, lived in small-size communities of less than 10,000 people (81.5%), and had resided in their neighborhoods from 10 to 20 years. In fact, most opponents lived in single houses (95.6%) in neighborhoods composed mostly of single houses (84.4%) that have a low percentage of existing mobile homes.

In addition, most opponents (78.5%) have never resided in a manufactured home but knew someone living in one (83.6%). Moreover, most opponents (84.5%) had visited a manufactured home within the last five years (71.7%); particularly within a year (45.4%) of responding to this survey. They indicated that the manufactured home visited was mostly in good condition and they also considered themselves to have average knowledge about manufactured housing. Finally, the

opponents had an average level of innovativeness equal to 70.49. That average score is consistent with that of the total sample of respondents.

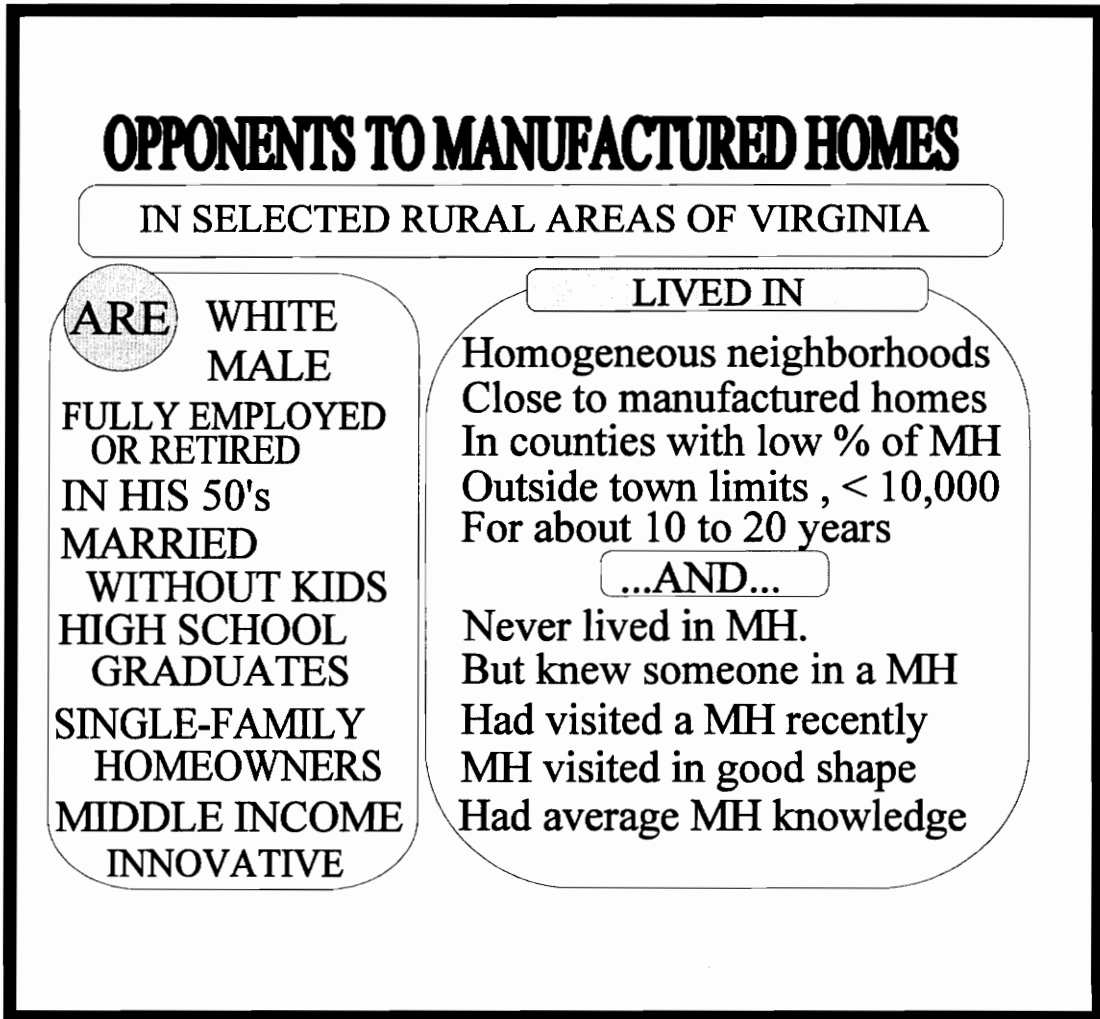


Figure 5. Opponents to Manufactured Homes.

Respondents' Comments About Manufactured Housing

Appendix F illustrates selected comments noted on the back of 168 returned questionnaires (30.4% of total sample). These comments are evidence of the sentiments held by people in rural areas of Virginia. Specifically, 83 respondents commented on single-section units and 85 respondents commented on double-section units. Many respondents supported manufactured homes for young or retired couples, others did not support manufactured homes at all. Comments were particularly negative when referring to single-section models and more positive when discussing double-section models.

Many comments suggested that the general public in rural Virginia may still have some reservations regarding the soundness of the materials, structural design, and features of manufactured homes. This fact indicates that despite the technological advances of the manufactured home industry, an educational process is needed to inform the public about the advantages and improved features of the new product.

CHAPTER 5

ANALYSES AND DISCUSSION

This chapter includes data analyses and a discussion of the results. The purpose of the study was to test the hypothesis that there is a significant relationship between "neighborhood level of acceptance for locating manufactured homes" (MHACCEPT) and:

- a. Perceived appearance and condition of manufactured homes (MHCONDIT)
- b. Perceived social behavior of manufactured home occupants (MHBEHAV)
- c. Perceived neighborhood physical homogeneity level (NEIGPHYS)
- d. Perceived neighborhood social homogeneity level (NEIGSOI)
- e. Housing value (HSVALUE)
- f. Respondent's gender (REGENDER)
- g. Respondent's age (RESPAGE)
- h. Respondent's household size and composition (REHSHOLD)
- i. Respondent's race (RESRACE)
- j. Respondent's innovativeness toward housing (INNOVAT)
- k. Respondent's knowledge about manufactured homes (MHKNOWLE)
- l. County's percentage (%) of existing manufactured homes (MHPCT)
- m. Manufactured home unit type (MHTYPE).

Pearson Product-Moment Correlations were performed to determine the level of relationship among the independent variables and with the dependent variable.

Variables that correlated higher than $p = .50$ were examined to determine if there was a linear dependency among them. Finally, multiple regressions were performed to test the hypotheses of this study. Missing values were handled through the SPSS listwise deletion option. In addition to the full-sample regression analysis, regression equations were computed for the single- and double-section survey subsample groups.

Correlations

Correlations among the independent variables of the total sample indicated a very strong association at the $p < .001$ level between perceived manufactured home occupants' behavior and perceived manufactured home condition and appearance. Correlations between each of these two variables and the dependent variable, acceptance of manufactured homes, indicated a stronger relationship with perceived manufactured home occupants' behavior than with perceived manufactured home condition at the $p < .001$ level. Correlations among the independent variables and the dependent variable indicated an association at the $p < .001$ level from perceived manufactured home occupants' behavior, perceived manufactured home condition and appearance, percent of manufactured homes in a county, and the type of manufactured home. Correlations at the $p < .01$ were also noted between manufactured home acceptance and respondent's manufactured home knowledge and respondent's gender.

Table 15
Correlations among Dependent and Independent Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Respondents (n = 416)														
1. MH behavior	---	.70**	.00	-.01	.06	.02	.08	-.04	-.01	.13*	-.04	.09	.19**	.50**
2. MH condition	---	---	-.00	-.03	.06	.04	.01	-.09	-.06	.11*	-.07	.12*	.19**	.49**
3. Age	---	---	---	-.38**	.07	.01	-.26**	-.08	-.28**	-.01	.02	-.06	-.00	-.09
4. Hsehold type	---	---	---	---	-.02	-.00	.24**	-.01	.14*	.05	-.02	-.15*	-.05	-.00
5. Social homog.	---	---	---	---	---	.46**	.01	.00	-.01	.05	.03	-.12*	.00	.04
6. Phys. homog.	---	---	---	---	---	---	-.03	-.02	.01	-.10	.03	-.07	-.04	-.03
7. MH knowledge	---	---	---	---	---	---	---	-.09	.38**	.09	.03	-.16**	-.15*	.12*
8. House Value	---	---	---	---	---	---	---	---	-.06	-.13*	.00	.03	.11	-.02
9. Innovativeness	---	---	---	---	---	---	---	---	---	-.08	-.02	-.10	-.10	-.01
10. MH Percent	---	---	---	---	---	---	---	---	---	---	.07	.04	-.01	.18**
11. Race	---	---	---	---	---	---	---	---	---	---	---	-.09	-.05	-.06
12. Gender	---	---	---	---	---	---	---	---	---	---	---	---	.02	.13*
13. MH type	---	---	---	---	---	---	---	---	---	---	---	---	---	.27**
14. MH accept.	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Note. One-tailed significance levels: *p = .01. **p = .001.

Acceptance of Manufactured Homes: Regression Analyses

Thirteen independent variables were included in the statistical model for predicting levels of acceptance of manufactured homes. Ten variables were treated as continuous and three categorical variables were coded as dummy variables for inclusion in the regression analyses. The dummy variables are shown in Table 16.

Table 16
Treatment of Categorical Variables

Variable Name	Dummy Name	Coding
Race (RESPRACE)	Dummy1	1 = white 0 = nonwhite
Gender (REGENDER)	Dummy2	1 = female 0 = male
Manufactured Home Unit Type (MHTYPE)	Dummy3	1 = double section 0 = single section

Note. For the purpose of the regression analyses, the categories coded "0" represent the suppressed or comparison categories.

Multiple regression analyses on the total sample were conducted to test the main hypothesis of this study. Table 17 shows the results of the initial regression analysis. Figure 6 shows the resulting regression model with the variables which were significant at the $p < .05$.

Table 17
Regression Analysis for the Prediction of MH Acceptance

Variable Name	<i>B</i>	<i>SE B</i>	β	<i>T</i>	<i>Sig T</i>	ΔR^2	<i>R</i> ²
(INTERCEPT)	-.182	.756		-.242	.809		
MHBEHAV	.384	.087	.253	4.414	.000	.2516	.2516
MHCONDIT	.355	.082	.247	4.315	.000	.0381	.2898
MHTYPE	.435	.099	.184	4.398	.000	.0260	.3159
MHKNOWLE	.132	.047	.130	2.809	.005	.0159	.3318
MHPCT	.279	.107	.108	2.600	.009	.0134	.3452
REGENDER	.200	.104	.081	1.921	.055	.0088	.3541
RESPAGE	-.006	.003	-.076	-1.659	.097	.0028	.3569
REHSHOLD	-.032	.036	-.038	-.869	.385	.0011	.3580
RESPRACE	-.152	.187	-.033	-.817	.414	.0010	.3591
NEIGPHYS	-.081	.081	-.045	-1.001	.317	.0006	.3597
NEIGSOVI	.078	.082	.043	.950	.342	.0014	.3612
INNOVAT	-.003	.007	-.022	-.499	.618	.0004	.3616
HSVALUE	3.315E-04	.023	5.869E-04	.014	.809	.0000	.3616

Note. $p < .05$. $R^2 = .3616$. $F_{(13, 402)} = 17.518$. Sig F = .0000.

The overall statistical model which included 13 independent variables predicted 36.2% of the acceptance of manufactured homes (N = 416). However, only five variables were significant predictors of the dependent variable at $p < .05$. One additional variable, "respondent's gender," was marginally significant at $p = .0554$; adding very little predicting value ($\Delta R^2 = .0088$) to the overall portion of variance in acceptance levels accounted for by the statistically-significant independent variables ($R^2 = .3452$). Thus, the first six variables in Table 15 were the most significant in terms of predicting manufactured home acceptance. In fact, the associated coefficient

of determination for the full model changed very little after including statistically-insignificant variables ($R^2 = .3616$; $\Delta R^2 = .0075$).

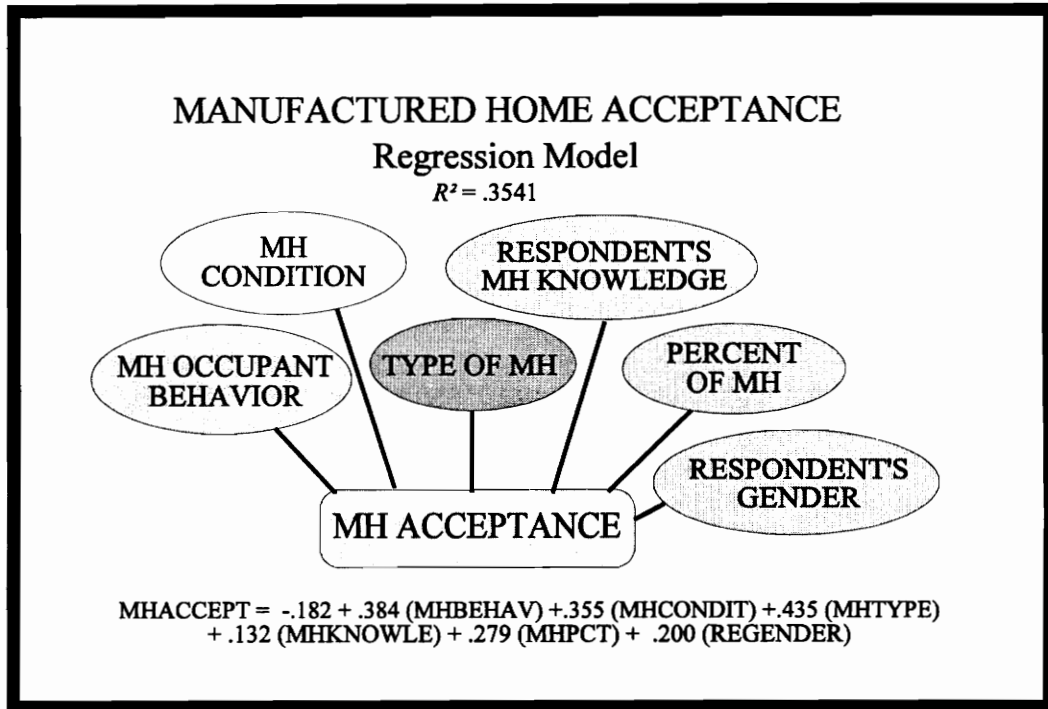


Figure 6. Regression Model for Manufactured Home Acceptance.

The resulting regression equation from the regression model was as follows:

$$MHACCEPT = -.182 + .384 (MHBEHAV) + .355 (MHCONDIT) + .435 (MHTYPE) + .132 (MHKNOWLE) + .279 (MHPCT) + .200 (REGENDER)$$

Each independent variable's contribution to the prediction of manufactured home acceptance is explained below.

Perceived social behavior of manufactured home occupants (MHBEHAV).

This variable showed the highest coefficient of determination for the model, accounting for 25.2% of the total variance of manufactured home acceptance. This finding supports Dear and Taylor's (1982) theory on attitudes toward mental health facilities. That is, perceived negative occupants' behavior is considerably predictive of low acceptance levels and NIMBY attitudes. Further, the importance of this variable indicates that the rejection of manufactured homes can be partially explained by socioeconomic class issues that associate improper or socially-unacceptable behavior with lower-income persons.

Perceived appearance and condition of manufactured homes (MHCONDIT).

This variable only added a little more predictive value to the model ($\Delta R^2 = .038$) for an overall $R^2 = .2898$. When the condition and appearance of manufactured homes are perceived positively the acceptance levels are likely to be higher.

Manufactured home unit type (MHTYPE). This variable showed the largest regression coefficient ($B = .4355$) of the regression model, but only the third largest standardized regression coefficient ($\beta = .1844$). Thus one could infer this variable's large impact on the overall equation when perceived occupants' behavior and unit condition and appearance are taken out of the model. The suppressed dummy category for this variable was the "single-section manufactured home," thus, with a value of "1," double-section manufactured homes are more likely to be accepted than single-section manufactured home units. In sum, regardless of manufactured home

type, condition or appearance, perceptions about occupants and their behavior were most predictive of the respondent's acceptance levels for manufactured homes. Nonetheless, respondents were more likely to accept double-section units even after controlling for these other characteristics.

Respondent's knowledge about manufactured homes (MHKNOWLE).

Although a significant predictor, this variable showed a relatively small impact on the dependent variable when compared with the other statistically-significant independent variables. Its standardized regression coefficient is the fourth largest among the five significant variables and its inclusion in the model increased the overall coefficient of determination by 1.6% ($\Delta R^2 = .0159$). The more knowledgeable a person is about this form of housing the more likely he or she would accept it, but this impact is slight.

Percentage of manufactured homes in a county (MHPCT). High presence of manufactured homes helped significantly predict their acceptance and also suggests a community with relatively easy regulations regarding the placement of manufactured homes. Therefore, one can also infer that the community would be relatively familiar with the characteristics of this form of housing. This independent variable contributed 1.3% to the overall prediction of acceptance levels. This significant variable yielded an overall $R^2 = .3452$.

Respondent's gender (REGENDER). This dummy-coded categorical variable had "males" as the suppressed category for the regression analysis. Its relatively

significant contribution to the model lies on the fact that female respondents were more likely than male respondents to accept manufactured homes in their neighborhoods. After accounting for this marginally statistically-significant variable (at a $p < .05$) the regression model yielded a $R^2 = .3541$.

The remainder of the independent variables were not significant in the prediction of manufactured home acceptance by the respondents. In fact, their contribution to the overall regression model was minimum ($\Delta R^2 = .0075$) and their exclusion does not significantly hinder the power of the regression model. The variables that were not significant were: respondent's age (RESPAGE), respondent's household size and composition (REHSHOLD), respondent's race (RESRACE), perceived neighborhood physical homogeneity level (NEIGPHYS), perceived neighborhood social homogeneity level (NEIGSOI), respondent's innovativeness toward housing (INNOVAT), and housing value (HSVALUE).

Consequently, except for respondent's gender, other demographic and socioeconomic characteristics such as age, race, household composition, innovativeness, and housing value did not appear to have a relationship with the dependent variable. Similarly, the social and physical homogeneity of the respondents' neighborhoods did not add much explanation to the model. This finding was also evident in the results of the Pearson product-moment correlation test (see Table 15). The size of the correlation coefficients between manufactured home acceptance and these variables was very small and ranged from .00 to .09.

Acceptance of Manufactured Homes by Subsample Group

The researcher explored the differences between respondents to the single- and the double-section surveys by conducting a regression analysis for each subsample.

Acceptance of single-section manufactured homes. Regression analyses on the total single-section subsample were conducted to test the main hypothesis of this study. A multiple regression analysis (see Table 18) for the single-section survey subsample ($N = 215$) resulted in a $R^2 = .2934$ which included all 12 variables while controlling for manufactured home type (MHTYPE).

Table 18
Regression Analysis for the Prediction of Single-Section MH Acceptance

Variable Name	<i>B</i>	<i>SE B</i>	β	<i>T</i>	<i>Sig T</i>	ΔR^2	R^2
(INTERCEPT)	-.249	1.098		-.227	.820		
MHBEHAV	.348	.116	.228	2.989	.003	.1600	.1600
MHPCT	.623	.147	.265	4.234	.000	.0671	.2272
MHCONDIT	.273	.111	.189	2.454	.015	.0250	.2522
RESPAGE	-.006	.005	-.088	-1.235	.218	.0142	.2665
RESPRACE	-.500	.293	-.105	-1.704	.089	.0096	.2761
MHKNOWLE	.117	.067	.123	1.759	.080	.0078	.2840
REGENDER	.179	.147	.078	1.221	.223	.0061	.2901
NEIGPHYS	.089	.113	.052	.788	.431	.0020	.2922
REHSHOLD	-.026	.051	-.035	-.521	.602	.0009	.2931
NEIGSOI	-.028	.112	-.016	-.256	.798	.0002	.2933
HSVALUE	-.003	.036	-.005	-.090	.928	.0000	.2934
INNOVAT	-8.5211E-04	.010	-.005	-.084	.933	.0000	.2934

Note. $p < .05$. $R^2 = .2934$. $F_{(12, 202)} = 6.99$. $\text{Sig } F = .0000$.

In this subsample regression model, the only variables which were significant predictors at a $p < .05$ level were (see Figure 7): perceived single-section manufactured home occupants' behavior (MHBEHAV), percentage of mobile homes in the county (MHPCT), and perceived condition and appearance of the single-section units (MHCONDIT). When compared with the full-sample model (see Tale 17), these three independent variables showed the same direction of relationship with the dependent variable. Again, perceived manufactured home occupants' behavior contributed the most prediction power ($\Delta R^2 = .1600$) to the variance in acceptance levels. The associated coefficient of determination for only those statistically-significant independent variables was $R^2 = .2522$.

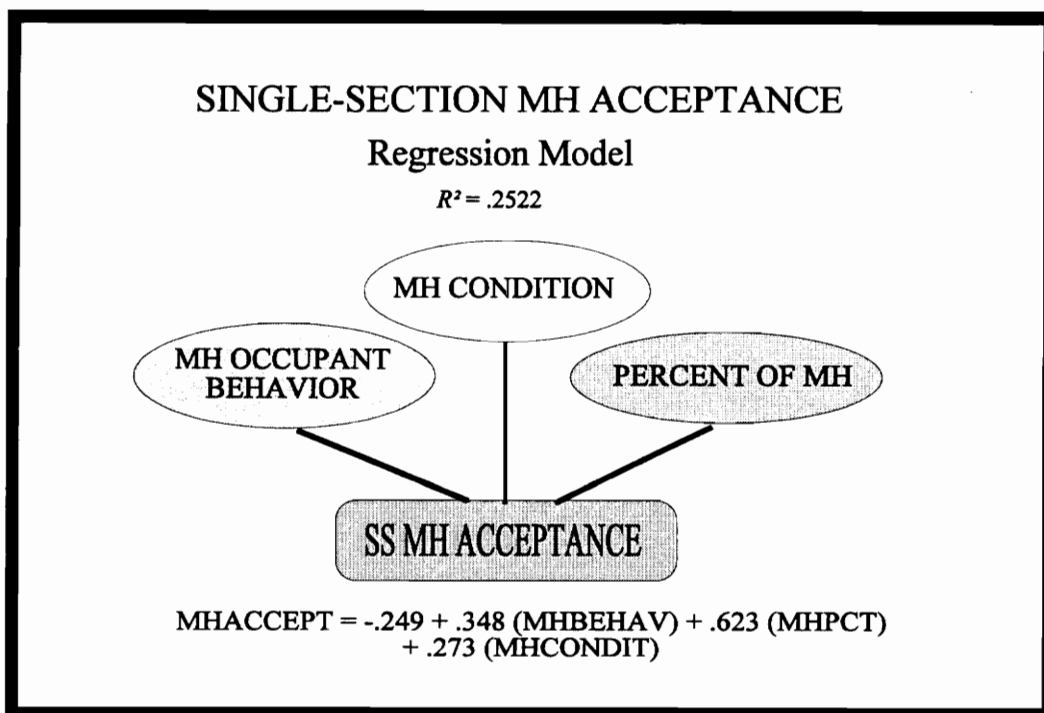


Figure 7. Regression Model for Single-Section MH Acceptance.

The equation for predicting single-section manufactured home acceptance (MHACCEPT) was as follows:

$$\text{MHACCEPT (single section)} = -.249 + .348 (\text{MHBEHAV}) + .623 (\text{MHPCT}) \\ + .273 (\text{MHCONDIT})$$

This combination of variables explained 25.2% of the total variance in the acceptance level of single-section manufactured homes. Each standard deviation change in perceived behavior, percent of manufactured homes in county, and perceived manufactured home condition predicted a change in acceptance levels for single-section manufactured homes.

Acceptance of double-section manufactured homes. A regression analysis

on the total double-section subsample ($N = 201$) was also conducted to test the main hypothesis of this study. Regression results are presented in Table 19.

Table 19
Regression Analysis for the prediction of Double-Section MH Acceptance

Variable Name	<i>B</i>	<i>SE B</i>	β	<i>T</i>	<i>Sig T</i>	ΔR^2	R^2
(INTERCEPT)	1.410	1.096		1.286	.200		
MHCONDIT	.509	.124	.370	4.086	.000	.3121	.3121
MHBEHAV	.347	.133	.237	2.609	.009	.0294	.3415
MHKNOWLE	.141	.067	.136	2.092	.037	.0102	.3518
REGENDER	.241	.148	.098	1.620	.106	.0103	.3621
NEIGPHYS	-.242	.116	-.140	-2.071	.039	.0056	.3678
NEIGSOVI	.195	.121	.111	1.602	.110	.0080	.3758
INNOVAT	-.019	.012	-.100	-1.529	.127	.0035	.3794
RESPAGE	-.006	.004	-.088	-1.363	.174	.0025	.3820
REHSHOLD	-.070	.054	-.081	-1.277	.203	.0045	.3869
MHPCT	-.134	.158	-.051	-.850	.396	.0015	.3884
RESPRACE	.187	.247	.044	.758	.449	.0018	.3902
HSVALUE	-.015	.030	-.031	-.526	.599	.0009	.3911

Note. $p < .05$. $R^2 = .3911$. $F_{(12,188)} = 10.06$. $\text{Sig } F = .0000$.

The regression analysis shown in Table 19 included 12 independent variables while controlling for another independent variable, manufactured home type (MHTYPE), included in the original full-sample regression model. The regression equation for the acceptance of double-section manufactured homes ($N = 201$) yielded an overall coefficient of determination of .3911. This coefficient was higher than the

coefficient obtained for the single-section regression model ($R^2 = .2934$) and that of the full sample regression model ($R^2 = .3616$), therefore, yielding a stronger prediction power for acceptance levels.

In this regression model (see Table 19), only 4 independent variables were significant at a $p < .05$ level: perceived manufactured home appearance and condition (MHCONDIT), perceived manufactured home occupants' behavior (MHBEHAV), respondent's knowledge about manufactured homes (MHKNOWLE), and perceived neighborhood physical homogeneity level (NEIGPHYS). In contrast with the previous models, perceived manufactured home occupants' behavior was not the single most predictive variable in the model ($\Delta R^2 = .0294$). Instead, perceived manufactured home appearance and condition had the largest prediction power of acceptance of double-section manufactured homes ($\Delta R^2 = .3121$). This finding indicated that perceptions about double-section manufactured home occupants' behavior are not necessarily as important as the actual appearance and condition of said type of unit. Therefore, respondents again associate a "better" behaved group of occupants with the double-section homes than with the single-section homes.

Additionally, in this regression model, percentage of manufactured homes in a county (MHPCT) was no longer among the statistically-significant variables. Instead, this model added perceived neighborhood physical homogeneity level (NEIGPHYS) suggesting that neighborhoods which were less physically-homogeneous neighborhoods would be more accepting of double-section manufactured homes.

When compared with the full-sample model, the intercept had changed direction and increased in value. All significant variables maintained the same direction of their relationships with acceptance levels.

Thus, after accounting for only those statistically-significant variables (see figure 8), the resulting equation for predicting acceptance of double-section manufactured homes (MHACCEPT) is as follows:

$$\text{MHACCEPT (double-section)} = 1.410 + .509 (\text{MHCONDIT}) + .347 (\text{MHBEHAV}) \\ + .141 (\text{MHKNOWLE}) - .242 (\text{NEIGPHYS})$$

This combination of variables explained 35.7% of the total variance in the acceptance level of double-section manufactured homes for all double-section survey respondents. Each standard deviation change in perceived double-section manufactured home conditions, perceived double-section manufactured home occupants' behavior, respondent's manufactured housing knowledge, and perceived neighborhood physical homogeneity level predicted a change in acceptance levels.

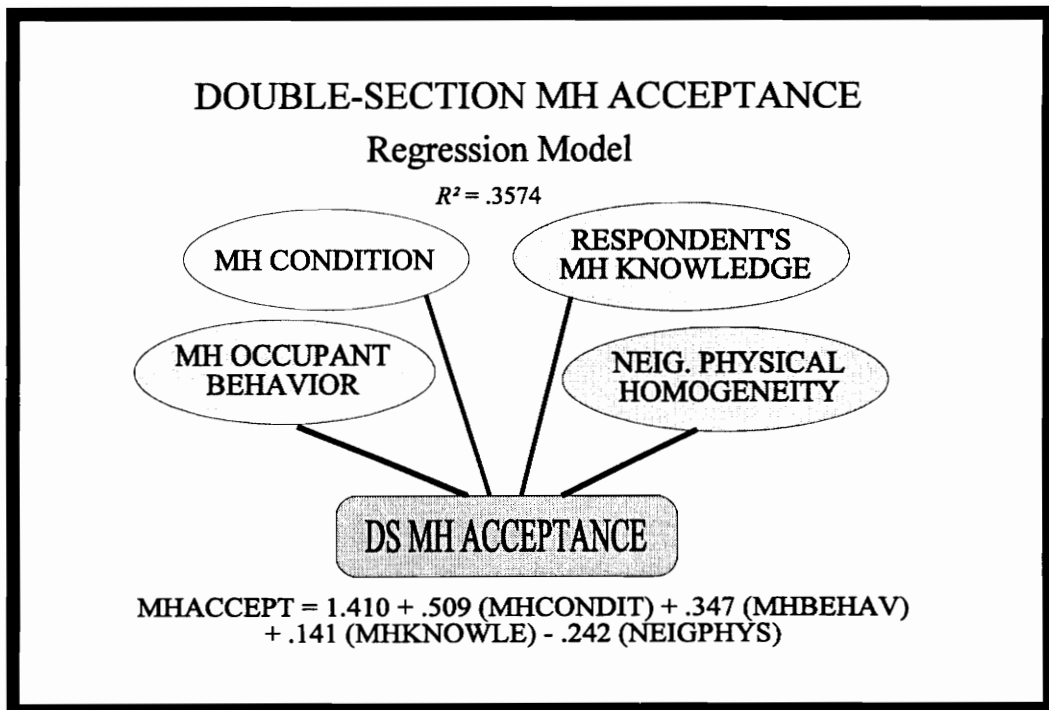


Figure 8. Regression Model for Double-Section MH Acceptance.

Comparison of Regression Models

The models for each type of manufactured home shared a few similarities. They both included perceived manufactured home appearance and condition (MHCONDIT) and perceived manufactured home occupants' behavior (MHBEHAV). The regression coefficients on all three models were very stable in terms of perceived manufactured home occupants' behavior. This finding suggests that acceptance is affected by a socioeconomic class issue that surrounds manufactured homes regardless of their types. Additionally, perceived manufactured home condition and appearance was very important in the acceptance of double-section units but not in the case of

single-section units. This finding suggests that once a respondent disassociates the negative perceptions about the manufactured home occupant, double-section units may be evaluated more in terms of their appearance and condition.

When compared to the double-section model, the single-section model included one additional variable: percentage of manufactured homes in a county (MHPCT). This additional variable more than doubled the value of its regression coefficient (see Tables 17 and 18) when compared with the full-sample model. Therefore, it appears that acceptance of single-section units was significantly increased in areas where there is a high proportion of manufactured homes. High presence of manufactured homes could be the result of a rural community's high reliance on manufactured homes for housing. However, this variable did not appear to be important in the acceptance of double-section units.

In contrast, the double-section model included respondent's manufactured housing knowledge (MHKNOWLE) and neighborhood physical homogeneity level (NEIGPHYS). The regression coefficients for respondent's manufactured housing knowledge were very stable in both subsample models. However, manufactured housing knowledge appeared to be very important only in the case of double-section units. In the case of physical homogeneity levels, the regression coefficients varied among subsample models in terms of direction and size. In the double-section model the coefficient tripled in size when compared to the full-sample and single-section models. This variable was only important to the acceptance of double-section units.

In summary, the inclusion of percentage of manufactured homes did not help the single-section model ($R^2 = .2522$) surpass the prediction power of the double-section model ($R^2 = .3574$). However, the double-section subsample model produced a coefficient of determination close to that of the full sample model ($R^2 = .3541$). When accounting for all independent variables, however, the full-sample model appeared to be more efficient than the single- and double-section models in the prediction of acceptance levels. However, this could be attributed to the larger size of the full sample when compared with the size of the subsamples.

The differences between the single- and double-section regression models appeared to be associated with the type of manufactured home unit (MHTYPE) and the respective respondents' perceptions regarding occupants and condition. In other words, respondents reacted more negatively towards single-section units due to their common association with lower-income persons. The assumption that double-section unit occupants are better behaved than single-section unit occupants may explain why perceived behavior was not at the top of the significant contributors to the prediction of acceptance levels.

In general, all models showed that the characteristics of the respondents seemed to have little effect on manufactured home acceptance. Instead, perceived characteristics of manufactured home occupants was more important in the regression model.

CHAPTER 6

CONCLUSIONS

Summaries, conclusions, implications and recommendations for further research are presented in this chapter.

Summary

This study investigated community residents' acceptance of single- and double-section manufactured housing as a residential alternative in rural neighborhoods. The Not In My Back Yard or "NIMBY" syndrome was addressed as it affected the acceptance of this type of residential dwelling in rural areas of Virginia. The counties of Bath, Craig, Southhampton, Buckingham, Pulaski, Buchanan, Rappahannock, and King and Queen were selected to represent rural counties from the Urban Crescent, Southwest, Southside, and Central Regions of Virginia. Each region was represented by two counties-- one with the highest and another with the lowest percentage of manufactured homes.

A total of 2,000 rural households were surveyed through mail questionnaires. Two questionnaires were developed, one about single-section manufactured homes and another about double-section manufactured homes. These questionnaires were evenly distributed by mail to each region and county. Unfortunately, there were many questionnaires which lacked the correct addresses and were not delivered; thus affecting the overall response rate for the survey. The total sample of usable questionnaires ($N = 552$), a response rate of 48.5% of deliverable questionnaires,

consisted of 274 respondents to the single-section manufactured home survey and 278 respondents to the double-section manufactured home survey. In general, the respondents showed similar characteristics to those of the general rural population of Virginia.

The literature reviewed in this study supported the notion that the NIMBY Syndrome or opposition to manufactured homes, affects their placement and limits the housing choices available to limited-income households. Moreover, previous studies acknowledged the prevalent prejudice against manufactured homes and their residents. However, no study to date had addressed the NIMBY syndrome with regard to manufactured housing. Consequently, this study investigated the reasons for accepting or opposing manufactured housing in order to fill this gap in housing research. This study was important because it targeted a different research subject within the NIMBY syndrome and because it could bring more understanding as to the reasons why people oppose manufactured homes.

A theoretical framework for the acceptance of manufactured housing was developed based on Dear and Taylor's (1982) model for neighborhood acceptance of mental health facilities. This model and the research studies that supported the inclusion of its constructs were utilized in the formulation of the research hypothesis. The researcher tested the hypothesis that there was a significant relationship between neighborhood level of acceptance of manufactured homes and: (a) Perceived appearance and condition of manufactured homes; (b) perceived social behavior

displayed by manufactured home occupants; (c) perceived neighborhood physical homogeneity level; (d) perceived neighborhood social homogeneity level; (e) housing value; (f) gender; (g) age; (h) household size and composition; (i) race; (j) innovativeness; (k) knowledge about manufactured homes; (l) county's percentage of existing manufactured homes; and (m) manufactured home type.

This study's hypothesis was tested for the full sample and also independently for the two subsample groups (i.e., respondents to the single-section manufactured home surveys and respondents to the double-section manufactured home surveys).

Results from multiple regression analyses indicated that in the:

- (a) Full-sample model - positively perceived manufactured home occupants' behaviors, county's high percentage of manufactured homes, positively perceived manufactured home conditions, double-section manufactured home types, female respondents, and high level of knowledge about manufactured homes significantly predicted 35.4% of the variance in acceptance of manufactured homes in rural Virginia,
- (b) Single-section model - positively perceived manufactured home occupants' behavior, county's high percentage of manufactured homes, and positively perceived manufactured home condition and appearance significantly predicted 25.2% of the variance in acceptance of single-section manufactured homes in rural Virginia,

- (c) Double-section model - positively perceived manufactured home conditions, positively perceived manufactured home occupants' behavior, high level of knowledge about manufactured housing, and high levels of neighborhood physical homogeneity accounted for 35.7% of the variance in acceptance of double-section manufactured homes in rural Virginia.

Given the predictive power of each of the above three models, the regression model of the full sample showed a stronger and more efficient regression model than the other subsample models. Of the two subsample models, however, the double-section model was the closest to the full sample model in terms of predictive power. The single-section model remained as the least efficient and predictive model of all three models. However, the full-sample model accounted for only 35.4% of the variance in manufactured home acceptance.

In addition to the regression analyses, descriptive results from this study suggested a high level of homogeneity between the single- and the double-section survey subsamples. In fact, most respondents were found to be white, mostly mature in age (an average of 54 years of age), male, high school or GED graduates, in full-time occupations, either married with no children or married with 2 children, and with annual household incomes between \$25,000 and \$35,000.

Furthermore, most respondents were owners of mostly \$50,000 to \$100,000 houses, lived close to manufactured homes, in socially-homogeneous neighborhoods outside town or city limits, in small-size communities of less than 1,000 people, and

1,000 people, and had resided in their neighborhoods an average of 20 to 30 years. In contrast, respondents also lived in neighborhoods that were not physically homogeneous and that included mobile or manufactured homes in addition to their stick-built houses. The perception of the neighborhoods' physical homogeneity was stronger among respondents to the double-section surveys.

The subsample groups differed in terms of their overall knowledge about manufactured housing. Double-section survey respondents scored higher than single-section survey respondents in their perceived knowledge about manufactured homes. Additionally, most respondents believed that single-section units were in worse conditions than double-section units. Likewise, double-section manufactured home occupants were perceived as displaying better behavior than occupants of single-section units. Consequently, most respondents indicated that manufactured homes would have a negative impact and would not fit well in their neighborhoods. This perception was stronger in relation to single-section manufactured homes.

Respondents found that the double-section units they had visited were newer and in better condition than the single-section units visited. Respondents who had visited these units, particularly single-section homes, had done so recently. Respondents also indicated that most single-section homes were located in mobile home parks where the owners rented the land. Double-section units were found to be mostly located on privately-owned lots in residential areas and on permanent foundations. These findings are consistent with the current regulatory environment

for manufactured housing in the state of Virginia. These results also suggest that respondents were mostly familiar with older single-section and newer double-section manufactured home units.

Although respondents to the single-section survey were more innovative than respondents to the double-section survey, innovativeness as an independent variable in this study did not contribute significantly to the prediction of the acceptance of manufactured housing. The differences in the scores for innovativeness between the subsamples did not add value to the inclusion of personal innovativeness as an independent variable in the statistical model. The scale, however, yielded similar factors to those found by Gruber et al. (1990). Five factors explained over 50.0% of the total variance for the innovativeness scale. These factors were: Chance taking; New housing types; Home improvement; Housing designs and ideas; and Appearance versus comfort. The use of these factors in the prediction of manufactured home acceptance was beyond the scope of this study. Therefore, additional statistical analyses may be needed to correlate each factor with the acceptance of manufactured housing.

Neighborhood social and physical homogeneity levels did not have a significant effect upon manufactured home acceptance. This could be explained by the rural character of the sample and the fact that most respondents were either older couples with no children or were very small two-parent families. As Morris and Winter (1978) suggested, perceived neighborhood social homogeneity is highly important for

families with children. However, in this study, respondents believed that most manufactured home households were composed of white, small two-parent families who owned their units, worked full-time, and had similar education levels to them. Therefore the perception of social homogeneity met Morris and Winter's (1978) neighborhood norms which dictates that neighboring residents have similar socioeconomic characteristics (i.e., social class, life-cycle stage, education, age, race, and sometimes ethnic background). The only differing characteristic observed between respondents and manufactured home occupants was perceived household income. That is, respondents perceived manufactured home occupants to have lower income than themselves.

Neighborhood physical homogeneity in terms of actual architectural appearance may have been met by the similarity in size of double-section units with stick-built houses. This may be evident due to the fact that there was a significant difference between the physical homogeneity levels reported by single- and double-section survey respondents. The single-section subsample indicated a higher level of physical homogeneity than the double-section subsample. Although not statistically significant, this independent variable could theoretically explain why manufactured home acceptance levels stayed within mildly oppose to neither oppose nor favor categories.

Finally, the characteristics of opponents to manufactured housing were similar to those inferred by the researcher based on Morris and Winter's (1978) housing-related norms and the results from the Yankelovich Group (1989) on opposition to

homeless facilities. Opponents to manufactured homes were mostly homeowners of high cost housing, white, mature in age, male, high school or GED graduates with some vocational training, full-time employees or retired, married with no children, and with household incomes between \$30,000 and \$45,000.

Conclusions

Double-section units were more accepted than single-section units by the respondents. Based on the findings, it is not surprising that there was also a significant difference in levels of acceptance of manufactured homes between the subsamples. The conditions and appearance of newer double-section units in these areas suggested more positive perceptions from the respondents about the behavior of double-section manufactured home occupants.

However, despite the manufactured home type, the most predictive variable in the full sample model was the respondents' perception about manufactured home occupants' behavior. Therefore, Dear and Taylor's (1982) idea that the acceptance of mental health facilities is the result of the residents' perceptions about its users is supported by the results of this study.

In addition, results also lead to the conclusion that the higher the percentage of manufactured homes in a county, the higher the probability that non-manufactured home residents would accept manufactured home units, particularly, single-section units. This may be explained by the fact that the respondents indicated a high level of familiarity with and proximity to single-section manufactured homes in "OK"

condition. This idea is supported by Dear's (1991) conclusion about proximity to mental health facilities and its association with acceptance levels. The relatively high presence of single-section units in an area appears to increase their acceptance because residents of the area would be more acquainted with the characteristics of the units and their occupants. Moreover, a high presence of manufactured homes may be an indicator of higher acceptance by local public officials and residents.

Given the relatively small predictive power of the statistical model ($R^2 = .3541$), the theoretical framework used for this study should be examined in terms of the significant independent variables identified here. Based on the statistical model used in this study, the researcher concluded that from the 13 independent variables introduced in the regression equation, only positively perceived manufactured home occupants' behavior, county's high percentage of manufactured homes, positively perceived manufactured home conditions, double-section manufactured home types, female respondents, and high level of knowledge about manufactured homes significantly predicted 35.4% of the variance in acceptance of manufactured homes by persons in rural neighborhoods of Virginia.

Overall, the statistical models for the full sample and both the single- and double-section subsamples only accounted for 25.2% to 35.7% of the amount of the variance in the acceptance of manufactured homes in a neighborhood. Specification bias may have contributed to this situation and a review of the statistical model will become necessary to test the soundness of the theoretical model. That is, other

independent variables not included in the statistical model of this study need to be identified to reduce the amount of unexplained variance when predicting the acceptance of manufactured homes.

In terms of the objectives of this study, the research findings suggested that:

1. Perceptions about manufactured home occupants' behavior significantly contributed to the prediction of levels of acceptance toward the location of both single- and double-section manufactured homes by the subjects of this study;
2. Perceptions about the condition and appearance of manufactured homes played a significant role in the respondents' level of acceptance for the location of both single- and double-section manufactured homes in their neighborhoods;
3. Except for respondents' gender, the respondents' demographic characteristics (socioeconomic status, age, race, and household composition) entered into the statistical model were not significant in their contributions to the prediction of the acceptance of manufactured housing and their occupants in rural neighborhoods; and
4. Perceptions regarding neighborhood social and physical homogeneity did not play a significant role in the development of levels of acceptance or attitudes toward the location of manufactured homes in a neighborhood; except in the case of physical homogeneity and acceptance of double-section units.

However, the percentage of manufactured homes present in the county helped predict the acceptance of single-section manufactured homes.

The results of this study were limited to rural areas of Virginia. Therefore, the researcher cautions about the applicability of these findings to other populations. The fact that female respondents were significantly more accepting of manufactured homes than males indicated that respondent's gender could have been correlated with other independent variables in which there were significant differences between males and females. In fact, *t* tests indicated significant differences between male and female respondents in terms of: perceived manufactured home condition and appearance, perceived manufactured home occupants' behavior, knowledge about manufactured homes, anticipated manufactured home impacts in the neighborhood, condition of manufactured homes visited, perceived neighborhood fit for manufactured homes, personal innovativeness, income, household composition, employment status, educational level, and housing tenure.

Consequently, differences in acceptance levels between males and females could be attributed to the fact that females, on average, lived farther away than males from manufactured homes, had less knowledge about manufactured homes, and the manufactured homes visited were in better condition than those visited by males. In addition, female respondents perceived manufactured homes to be in better condition and have better behaved occupants than males did. Therefore, females also anticipated more positive manufactured home impacts in the neighborhood and believed that manufactured homes would fit in the neighborhood better than males did.

Female respondents were also significantly less educated and had lower incomes than male respondents. Furthermore, females were more likely to be retired or in part-time occupations than males, who were more likely to be in full-time or part-time jobs. On average, females were part of smaller households than males were; perhaps indicating the possibility of being single, single mothers, or widowers. Finally, female respondents were significantly less innovative than males.

In summary, the differences between acceptance levels of males and females can be explained by the above-cited situational and socioeconomic characteristics. Gender in itself explained little about manufactured home acceptance. In fact, there is the possibility that gender would not be a contributor to the prediction of acceptance levels if these situational and socioeconomic differences were controlled for. That is, when persons of any gender have similar socioeconomic characteristics and opportunities they may have similar acceptance levels toward manufactured homes.

Implications and Recommendations

This study served to illustrate how community attitudes and NIMBY can result from mostly negative perceptions about manufactured home occupants. Many survey respondents argued that manufactured homes are not really an adequate housing product and that they cannot compare with stick-built housing. Thus, why would a middle-class household buy a manufactured home if it could instead buy a stick-built home? It is unclear which came first, prejudice against manufactured home units as a product or prejudice against low-income households living in manufactured homes.

This research showed how the type of manufactured home unit can reduce or increase its acceptability, but its relative effect is minimal compared to that of negatively perceived occupants' behavior. Is it fair to assume that manufactured homes are mostly occupied by low-income households and, thus, bad social behavior is to be expected? Moreover, is it fair to assume that all low-income persons behave badly? If manufactured homes are one of the most affordable housing options, then their target market is clearly composed of households with limited incomes which face a housing affordability problem.

Consequently, based on this study's findings, manufactured home institutes, producers, and dealers could educate the general public about the various types of households which may reside in these units. Producers could also offer and market manufactured home models that could appeal to middle- and upper- middle class families to broaden acceptability. At a minimum, manufacturers will need to deal with two problems at the same time. That is, they will need to continue to improve the appearance of their products and also try to alleviate the prejudice against manufactured home consumers.

This study also suggested the possibility for researchers to explore underlying behavioral issues regarding manufactured home acceptance. For instance, additional research is needed to address the potential effect of each of the five obtained innovativeness scale factors on acceptance of manufactured homes. Likewise, the innovativeness scale may need to be altered to really measure the type of

innovativeness most likely to affect acceptance levels. Moreover, the researcher encountered several negative comments from respondents regarding the wording of the scale. Perhaps minor changes to the questions may produce a more clear scale for the type of subjects included in this study.

Furthermore, future research should address the acceptance of single- and double-section manufactured homes by non-whites. However, the sample obtained in this study represents the racial makeup of rural Virginia and non-whites are more likely to reside in metropolitan areas of Virginia (Bureau of the Census, 1993a). Researchers in states where manufactured homes can legally be placed in urban areas may want to study the acceptance of these units by residents of the area.

Results from this study also suggested that legislators and local planning officers in charge of zoning and regulations regarding manufactured homes will need to look at measures that will improve the design, durability and appearance of manufactured homes without making the product unaffordable. This challenge may be addressed by looking at and understanding public perceptions about the product's appearance, value, and occupants. Statistics showed there is a consumer market for manufactured homes, but that local regulations stand in the way. It remains unclear, however, what would happen if said regulations or exclusionary practices were lifted. Would more people buy the product? If so, this study suggested that it would be double-section units that would most likely be accepted, at least socially, in rural neighborhoods of Virginia.

Respondents' gender determined differences in the prediction of acceptance of manufactured homes. Yet this was not the case for acceptance of single- or double-section manufactured home prediction models. Future studies could try to study further the underlying reasons for the acceptance of manufactured homes based on gender differences. That is, researchers could look more into the situational and socioeconomic variables that may have conditioned females to be more accepting of manufactured homes than males.

The limited amount of variance explained by the 13 independent variables included in the statistical model suggested that there are other factors that could help predict manufactured home acceptance. A starting point may be to test whether other independent variables in the theoretical model of this study not included in the statistical model could help account for a larger part of the variance in manufactured home acceptance. For example, instead of using housing value as a means to measure socioeconomic status, a researcher may include respondent's income instead. In short, the theoretical framework used in this study proved to be useful in the prediction of acceptance levels, however, further studies will help refine its prediction power.

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**APPENDIX A
Instrument**

(Single-section and double-section manufactured home questionnaires)

Respondent No.: 1 - ____ - _____

**OPINION SURVEY ABOUT
MANUFACTURED HOMES**

**A SURVEY OF RESIDENTS FROM SELECTED COUNTIES
IN VIRGINIA**



Conducted by
**The Department of Housing, Interior Design and Resource Management
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
240 Wallace Hall, Blacksburg, Virginia 24061-0424**

SPRING 1995

Please take a few minutes to respond to the questions in this survey and return it in the envelope provided. No postage is required to mail this survey.

All information contained in this survey will remain anonymous and strictly confidential. Your name will never be revealed in any way.

Please do not write your name on this questionnaire.

If you live in a mobile/manufactured house please check here () and return this questionnaire unanswered in the envelope provided.

THE FOLLOWING PICTURE EXEMPLIFIES THE GENERAL TYPE OF MOBILE/
MANUFACTURED HOME THIS SURVEY IS REFERRING TO



THIS IS A SINGLE-WIDE MOBILE/MANUFACTURED HOME. MANUFACTURED HOME is the term now used to refer to a MOBILE HOME produced after 1976. There are various types of mobile/manufactured homes; however, we would like for you to respond to this survey based on **your perceptions and opinions** regarding single-wide mobile/manufactured homes.

Please circle only the one answer that most accurately describes your opinion on each of the following statements concerning the characteristics of single-wide mobile/manufactured homes and their residents in your county.

1. Most single-wide mobile/manufactured homes in this county are placed on:
(circle number)
 - 1 A PROVISIONAL FOUNDATION (on AXLES & WHEELS)
 - 2 BLOCKS AND MAY BE SKIRTED
 - 3 A PERMANENT FOUNDATION made out of blocks or bricks.
 - 4 DON'T KNOW

2. The appearance and condition of most single-wide mobile/manufactured homes in this county is: *(circle number)*

VERY BAD BAD OK GOOD VERY GOOD
1 2 3 4 5

3. Most single-wide mobile/manufactured homes are likely to be located in: *(circle number)*

1 MOBILE HOME / TRAILER PARKS
2 MOBILE HOME SUBDIVISIONS
3 RESIDENTIAL NEIGHBORHOODS
4 FARMS or AGRICULTURAL LAND, isolated from other residences

4. Most single-wide mobile/manufactured homes in this county are likely to be: *(circle number)*

1 OLDER THAN 20 YEARS
2 AROUND 10 YEARS OLD
3 NEW or AROUND 5 YEARS OLD
4 DON'T KNOW

5. Most single-wide mobile/manufactured home residents are likely to be: *(circle number)*

1 LOCAL PEOPLE
2 NEW PEOPLE/OUTSIDERS
3 DON'T KNOW

6. Most single-wide mobile/manufactured homes are likely to be occupied by: *(circle number)*

1 SINGLE PERSON(S)
2 COUPLES WITH NO CHILDREN
3 SMALL SINGLE-PARENT FAMILIES (2 to 3 members)
4 SMALL TWO-PARENT FAMILIES (3 to 4 members)
5 LARGE SINGLE-PARENT FAMILIES (4 or more members)
6 LARGE TWO-PARENT FAMILIES (5 or more members)

7. The behavior displayed by most single-wide mobile/manufactured home residents in terms of social conduct, cleanliness, and respect for the community is likely to be: *(circle number)*

VERY BAD BAD OK GOOD VERY GOOD
1 2 3 4 5

8. Most single-wide mobile/manufactured home residents: *(circle number)*
- 1 OWN THEIR HOMES AND LAND
 - 2 RENT THEIR HOMES AND LAND
 - 3 OWN THEIR HOMES AND RENT THE LAND
9. Most single-wide mobile/manufactured home residents are likely to be: *(circle number)*
- 1 RICH/ WELL OFF
 - 2 MIDDLE CLASS
 - 3 LOW-INCOME
 - 4 POOR, VERY LOW-INCOME
10. In terms of education, most single-wide mobile/manufactured home residents have: *(circle number)*
- 1 NONE OR SOME GRADE SCHOOL (none, or grades 1 through 8)
 - 2 SOME HIGH SCHOOL (grades 9 thru 12)
 - 3 HIGH SCHOOL GRADUATE OR EQUIVALENT(GED)
 - 4 SOME COLLEGE OR VOCATIONAL SCHOOL beyond high school
 - 5 COMPLETED a VOCATIONAL TRAINING Program beyond high school
 - 6 COMPLETED a 2-YEAR COLLEGE DEGREE
 - 7 COMPLETED a 4-YEAR COLLEGE DEGREE
 - 8 COMPLETED a GRADUATE OR PROFESSIONAL DEGREE
11. In terms of employment, most single-wide mobile/manufactured home heads of household are likely to be: *(circle number)*
- 1 IN FULL TIME JOBS or at least in 2 part-time jobs
 - 2 IN PART-TIME JOBS
 - 3 RETIRED
 - 4 HOMEMAKERS
 - 5 UNEMPLOYED
 - 6 STUDENTS (in part-time jobs or unemployed)
12. In terms of racial composition, most single-wide mobile/manufactured home residents are likely to be: *(circle number)*
- 1 BLACK / AFRICAN AMERICAN
 - 2 WHITE / CAUCASIAN (Not of Hispanic origin)
 - 3 HISPANIC / LATINO
 - 4 NATIVE AMERICAN / INDIAN
 - 5 ASIAN / PACIFIC ISLANDER
 - 6 OTHER: *(please specify)* _____

For each of the following statements, indicate the extent to which you AGREE OR DISAGREE with the statement (circle one number for each)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
13. The unusual house is often a waste of money.....	1	2	3	4
14. I like to experiment with new ways of doing things.....	1	2	3	4
15. I like to take a chance.....	1	2	3	4
16. I enjoy looking at new housing designs in magazines.....	1	2	3	4
17. Some contemporary housing is stimulating.....	1	2	3	4
18. I like to fool around with new ideas even if they turn out to be a waste of time.....	1	2	3	4
19. When it comes to taking chances, I'd rather be safe than sorry.....	1	2	3	4
20. Changing technology, especially in housing, is a waste of money.....	1	2	3	4
21. If builders would quit wasting their time trying to create new housing types, they could build more affordable housing.....	1	2	3	4
22. I would rather not waste my time with some new ideas.....	1	2	3	4
23. I like to try new and different things.....	1	2	3	4
24. I like housing that is a little different.....	1	2	3	4
25. I often try to find out more about new housing types.....	1	2	3	4

(Continued from previous page. Please circle a number for each statement)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
26. Buying a new housing type that is not widely available costs more than it's worth.....	1	2	3	4
27. I would like a house that does not require me to learn new ways of doing things.....	1	2	3	4
28. I am less interested in the appearance of a house than in its comfort.....	1	2	3	4
29. As long as a heating system works well and meets my needs, I do not really care how it works.....	1	2	3	4
30. I am very curious about how new things work...	1	2	3	4
31. I like to build things for my house.....	1	2	3	4
32. I never take anything apart because I know I will never be able to put it back together again.	1	2	3	4
33. I like to fix things around the house.....	1	2	3	4
34. I would rather make repairs around the house myself than to have someone else make them....	1	2	3	4
35. The outside appearance of my house is not important.....	1	2	3	4
36. I do not enjoy any product unless I can use it to its fullest capacity.....	1	2	3	4
37. It is always possible to improve upon a house by adding new features.....	1	2	3	4
38. I try to keep up with new products and ideas that could improve my house.....	1	2	3	4

39. 1990 Census indicates that single-wide mobile/manufactured homes exist in your county. Approximately, how far do you live from the closest one? (circle number)
- 1 VERY CLOSE (next to or less than 1 mile away)
 - 2 CLOSE (between 1 and 3 miles)
 - 3 NOT CLOSE / NOT FAR (between 3 and 5 miles)
 - 4 FAR (between 5 and 10 miles)
 - 5 VERY FAR (more than 10 miles away)
 - 6 DONT KNOW
40. Have you ever lived in a single-wide mobile/manufactured home? (circle number)
- 1 NO
 - 2 YES
41. Do you know someone who is or has been living in a single-wide mobile/manufactured home? (circle number)
- 1 NO
 - 2 YES
42. Have you ever been inside a single-wide mobile/manufactured home? (circle number)
- 1 NO *[[If NO, go to question # 45]]*
 - 2 YES *[[If YES, continue]]*
43. Approximately how long ago were you last inside one? _____ YEARS
(If less than 1 year, answer 0).
44. What condition was that unit in? (circle number)
- | | | | | |
|----------|-----|----|------|-----------|
| VERY BAD | BAD | OK | GOOD | VERY GOOD |
| 1 | 2 | 3 | 4 | 5 |
45. Do you consider yourself knowledgeable about single-wide mobile/manufactured home characteristics, advantages, disadvantages, and/or general design features?
- 1 VERY KNOWLEDGEABLE
 - 2 SOMEWHAT KNOWLEDGEABLE
 - 3 AVERAGE KNOWLEDGE
 - 4 LITTLE KNOWLEDGE
 - 5 NO KNOWLEDGE AT ALL
46. Is your neighborhood composed mostly of? (circle number)
- 1 HOUSES
 - 2 APARTMENTS
 - 3 MOBILE or MANUFACTURED HOMES
 - 4 MIXTURE OF HOUSES and MOBILE/MANUFACTURED HOMES
 - 5 MIXTURE OF ALL THE ABOVE TYPES OF RESIDENCES

47. Is your neighborhood located? (circle number)

- 1 WITHIN TOWN LIMITS
- 2 RIGHT OUTSIDE THE TOWN LIMITS
- 3 OUT IN THE COUNTRY

48. How many people live in your community or town? (circle number)

- 1 LESS THAN 1,000 PEOPLE
- 2 BETWEEN 1,000 AND 10,000 PEOPLE
- 3 BETWEEN 10,001 AND 20,000 PEOPLE
- 4 BETWEEN 20,001 AND 50,000 PEOPLE
- 5 MORE THAN 50,000 PEOPLE

49. How long have you lived in this neighborhood? (circle number)

- 1 LESS THAN 1 YEAR
- 2 BETWEEN 1 AND 5 YEARS
- 3 BETWEEN 6 TO 10 YEARS
- 4 BETWEEN 11 AND 20 YEARS
- 5 BETWEEN 21 AND 30 YEARS
- 6 MORE THAN 30 YEARS

50. What type of housing best describes the dwelling you currently live in?
(circle number)

- 1 A HOUSE
- 2 APARTMENT
- 3 TOWNHOUSE OR DUPLEX
- 4 OTHER, specify: _____

51. Do you presently ? (circle number)

- 1 OWN your home
- 2 RENT your home
- 3 OTHER, specify: _____

52. If you OWN your home, what would you estimate your house and lot would sell for today? (circle number)

- 1 LESS THAN \$50,000
- 2 \$ 50,001 -- \$100,000
- 3 \$100,001 -- \$150,000
- 4 \$150,001 AND ABOVE

For each of the following statements, please indicate the extent to which you AGREE OR DISAGREE with the statement; IF SINGLE-WIDE MOBILE/MANUFACTURED HOMES WERE LOCATED IN YOUR NEIGHBORHOOD: (circle one number for each statement)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
53. Property values in the neighborhood would increase.....	1	2	3	4
54. Traffic would increase in volume throughout the area.....	1	2	3	4
55. I would feel more satisfied with the neighborhood.....	1	2	3	4
56. Some residents would sell their homes and move away.....	1	2	3	4
57. The social image of the neighborhood would be better.....	1	2	3	4
58. More noise would be created.....	1	2	3	4
59. The quality of the neighborhood would be better.....	1	2	3	4
60. They would create a stronger residential character.....	1	2	3	4
61. They would attract desirable residents.....	1	2	3	4
62. They would create or maintain a safe environment for my family and myself.....	1	2	3	4
63. They would make property taxes go down	1	2	3	4
64. They would make the neighborhood look attractive.....	1	2	3	4
65. They would fit very well into the social and physical character of this neighborhood.....	1	2	3	4

66. In general how do you feel about locating a single-wide mobile/manufactured home in your neighborhood? (circle number)

- 1 STRONGLY OPPOSE
- 2 MILDLY OPPOSE
- 3 NEITHER OPPOSE NOR FAVOR
- 4 MILDLY FAVOR
- 5 STRONGLY FAVOR

67. Are you? (circle number)

- 1 MALE
- 2 FEMALE

68. In what year were you born? _____

69. Highest level of education you achieved: (circle number)

- 1 NONE OR SOME GRADE SCHOOL (none, or grades 1 through 8)
- 2 SOME HIGH SCHOOL (grades 9 thru 12)
- 3 HIGH SCHOOL GRADUATE OR EQUIVALENT (GED)
- 4 SOME COLLEGE OR VOCATIONAL SCHOOL beyond high school
- 5 COMPLETED a VOCATIONAL TRAINING Program beyond high school
- 6 COMPLETED a 2-YEAR COLLEGE DEGREE
- 7 COMPLETED a 4-YEAR COLLEGE DEGREE
- 8 COMPLETED a GRADUATE OR PROFESSIONAL DEGREE

70. Your employment status is: (circle number)

- 1 FULL TIME job or at least in 2 part-time jobs
- 2 PART-TIME job
- 3 RETIRED
- 4 HOMEMAKER
- 5 UNEMPLOYED
- 6 STUDENT (part-time job or unemployed)

71. Your race and ethnic background is: (circle number)

- 1 BLACK / AFRICAN AMERICAN
- 2 WHITE / CAUCASIAN (not of Hispanic origin)
- 3 HISPANIC / LATINO
- 4 NATIVE AMERICAN / INDIAN
- 5 ASIAN / PACIFIC
- 6 OTHER: (please specify) _____

72. Your home is composed of or occupied by: (circle number)

- 1 SINGLE PERSON(s)
- 2 COUPLE (s) WITH NO CHILDREN
- 3 A SMALL SINGLE-PARENT FAMILY (2 to 3 members)
- 4 A SMALL TWO-PARENT FAMILY (3 to 4 members)
- 5 A LARGE SINGLE-PARENT FAMILY (4 or more members)
- 6 A LARGE TWO-PARENT FAMILY (5 or more members)

73. Which of the following ranges of income best represent your household's total annual income? (please consider all sources of income from all contributing adults, such as wages, salaries tips, social security, retirement income, investment income, child support, alimony, welfare, etc):

- 1 LESS than \$5,000
- 2 \$5,000 to \$14,999
- 3 \$15,000 to \$19,999
- 4 \$20,000 to \$24,999
- 5 \$25,000 to \$34,999
- 6 \$35,000 to \$44,999
- 7 \$45,000 or GREATER

For each of the following statements, indicate the extent to which you AGREE OR DISAGREE with the statement (circle one number for each statement)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
74. The majority of the residents in my neighborhood are socially alike and have similar social characteristics.....	1	2	3	4
75. The majority of the houses or residences in my neighborhood are similar in terms of physical appearance, size, and price range.....	1	2	3	4

Is there anything else you would like to share about what you think of single-wide mobile/manufactured homes? If so, please use this space for that purpose.

THANK YOU FOR YOUR TIME AND CONTRIBUTION TO THIS STUDY.
Please return this survey using the enclosed, stamped envelope.

Respondent No.: 2 - ____ - _____

OPINION SURVEY ABOUT MANUFACTURED HOMES

A SURVEY OF RESIDENTS FROM SELECTED COUNTIES
IN VIRGINIA



Conducted by
The Department of Housing, Interior Design and Resource Management
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
240 Wallace Hall, Blacksburg, Virginia 24061-0424

SPRING 1995

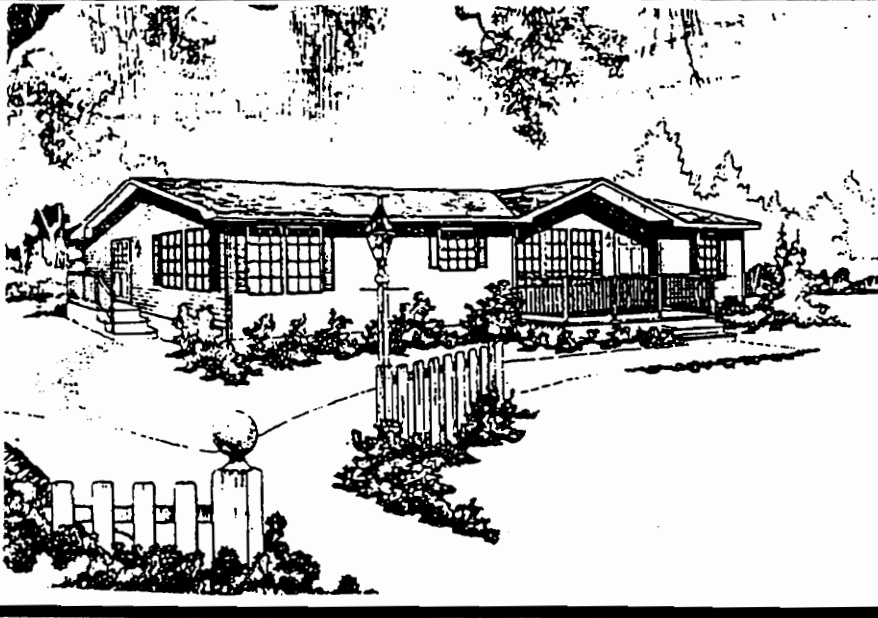
Please take a few minutes to respond to the questions in this survey and return it in the envelope provided. No postage is required to mail this survey.

All information contained in this survey will remain anonymous and strictly confidential. Your name will never be revealed in any way.

Please do not write your name on this questionnaire.

If you live in a mobile/manufactured house please check here () and return this questionnaire unanswered in the envelope provided.

THE FOLLOWING PICTURE EXEMPLIFIES THE GENERAL TYPE OF MOBILE/
MANUFACTURED HOME THIS SURVEY IS REFERRING TO



THIS IS A DOUBLE-WIDE MOBILE/MANUFACTURED HOME. MANUFACTURED HOME is the term now used to refer to a MOBILE HOME produced after 1976. There are various types of mobile/manufactured homes; however, we would like for you to respond to this survey based on **your perceptions and opinions** regarding double-wide mobile/manufactured homes.

Please *circle only the one answer* that most accurately describes your opinion *on each* of the following statements concerning the characteristics of double-wide mobile/manufactured homes and their residents in your county:

1. Most double-wide mobile/manufactured homes in this county are placed on.
(circle number)
 - 1 A PROVISIONAL FOUNDATION (on AXLES & WHEELS)
 - 2 BLOCKS AND MAY BE SKIRTED
 - 3 A PERMANENT FOUNDATION made out of blocks or bricks.
 - 4 DON'T KNOW

2. The appearance and condition of most double-wide mobile/manufactured homes in this county is: *(circle number)*

VERY BAD BAD OK GOOD VERY GOOD
1 2 3 4 5

3. Most double-wide mobile/manufactured homes are likely to be located in:
(circle number)

1 MOBILE HOME / TRAILER PARKS
2 MOBILE HOME SUBDIVISIONS
3 RESIDENTIAL NEIGHBORHOODS
4 FARMS or AGRICULTURAL LAND, isolated from other residences

4. Most double-wide mobile/manufactured homes in this county are likely to be:
(circle number)

1 OLDER THAN 20 YEARS
2 AROUND 10 YEARS OLD
3 NEW or AROUND 5 YEARS OLD
4 DONT KNOW

5. Most double-wide mobile/manufactured home residents are likely to be:
(circle number)

1 LOCAL PEOPLE
2 NEW PEOPLE/OUTSIDERS
3 DONT KNOW

6. Most double-wide mobile/manufactured homes are likely to be occupied by:
(circle number)

1 SINGLE PERSON(S)
2 COUPLES WITH NO CHILDREN
3 SMALL SINGLE-PARENT FAMILIES (2 to 3 members)
4 SMALL TWO-PARENT FAMILIES (3 to 4 members)
5 LARGE SINGLE-PARENT FAMILIES (4 or more members)
6 LARGE TWO-PARENT FAMILIES (5 or more members)

7. The behavior displayed by most double-wide mobile/manufactured home residents in terms of social conduct, cleanliness, and respect for the community is likely to be:
(circle number)

VERY BAD BAD OK GOOD VERY GOOD
1 2 3 4 5

8. Most double-wide mobile/manufactured home residents: *(circle number)*
- 1 OWN THEIR HOMES AND LAND
 - 2 RENT THEIR HOMES AND LAND
 - 3 OWN THEIR HOMES AND RENT THE LAND
9. Most double-wide mobile/manufactured home residents are likely to be: *(circle number)*
- 1 RICH/ WELL OFF
 - 2 MIDDLE CLASS
 - 3 LOW-INCOME
 - 4 POOR, VERY LOW-INCOME
10. In terms of education, most double-wide mobile/manufactured home residents have: *(circle number)*
- 1 NONE OR SOME GRADE SCHOOL (none, or grades 1 through 8)
 - 2 SOME HIGH SCHOOL (grades 9 thru 12)
 - 3 HIGH SCHOOL GRADUATE OR EQUIVALENT(GED)
 - 4 SOME COLLEGE OR VOCATIONAL SCHOOL beyond high school
 - 5 COMPLETED a VOCATIONAL TRAINING Program beyond high school
 - 6 COMPLETED a 2-YEAR COLLEGE DEGREE
 - 7 COMPLETED a 4-YEAR COLLEGE DEGREE
 - 8 COMPLETED a GRADUATE OR PROFESSIONAL DEGREE
11. In terms of employment, most double-wide mobile/manufactured home heads of household are likely to be: *(circle number)*
- 1 IN FULL TIME JOBS or at least in 2 part-time jobs
 - 2 IN PART-TIME JOBS
 - 3 RETIRED
 - 4 HOMEMAKERS
 - 5 UNEMPLOYED
 - 6 STUDENTS (in part-time jobs or unemployed)
12. In terms of racial composition, most double-wide mobile/manufactured home residents are likely to be: *(circle number)*
- 1 BLACK / AFRICAN AMERICAN
 - 2 WHITE / CAUCASIAN (Not of Hispanic origin)
 - 3 HISPANIC / LATINO
 - 4 NATIVE AMERICAN / INDIAN
 - 5 ASIAN / PACIFIC ISLANDER
 - 6 OTHER: *(please specify)* _____

For each of the following statements, indicate the extent to which you AGREE OR DISAGREE with the statement (*circle one number for each*)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
13. The unusual house is often a waste of money.....	1	2	3	4
14. I like to experiment with new ways of doing things.....	1	2	3	4
15. I like to take a chance.....	1	2	3	4
16. I enjoy looking at new housing designs in magazines.....	1	2	3	4
17. Some contemporary housing is stimulating.....	1	2	3	4
18. I like to fool around with new ideas even if they turn out to be a waste of time.....	1	2	3	4
19. When it comes to taking chances, I'd rather be safe than sorry.....	1	2	3	4
20. Changing technology, especially in housing, is a waste of money.....	1	2	3	4
21. If builders would quit wasting their time trying to create new housing types, they could build more affordable housing.....	1	2	3	4
22. I would rather not waste my time with some new ideas.....	1	2	3	4
23. I like to try new and different things.....	1	2	3	4
24. I like housing that is a little different.....	1	2	3	4
25. I often try to find out more about new housing types.....	1	2	3	4

(Continued from previous page. Please circle a number for each statement)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
26. Buying a new housing type that is not widely available costs more than it's worth.....	1	2	3	4
27. I would like a house that does not require me to learn new ways of doing things.....	1	2	3	4
28. I am less interested in the appearance of a house than in its comfort.....	1	2	3	4
29. As long as a heating system works well and meets my needs, I do not really care how it works.....	1	2	3	4
30. I am very curious about how new things work...	1	2	3	4
31. I like to build things for my house.....	1	2	3	4
32. I never take anything apart because I know I will never be able to put it back together again.	1	2	3	4
33. I like to fix things around the house.....	1	2	3	4
34. I would rather make repairs around the house myself than to have someone else make them....	1	2	3	4
35. The outside appearance of my house is not important.....	1	2	3	4
36. I do not enjoy any product unless I can use it to its fullest capacity.....	1	2	3	4
37. It is always possible to improve upon a house by adding new features.....	1	2	3	4
38. I try to keep up with new products and ideas that could improve my house.....	1	2	3	4

39. 1990 Census indicates that double-wide mobile/manufactured homes exist in your county. Approximately, how far do you live from the closest one? (circle number)
- 1 VERY CLOSE (next to or less than 1 mile away)
 - 2 CLOSE (between 1 and 3 miles)
 - 3 NOT CLOSE / NOT FAR (between 3 and 5 miles)
 - 4 FAR (between 5 and 10 miles)
 - 5 VERY FAR (more than 10 miles away)
 - 6 DONT KNOW
40. Have you ever lived in a double-wide mobile/manufactured home? (circle number)
- 1 NO
 - 2 YES
41. Do you know someone who is or has been living in a double-wide mobile/manufactured home? (circle number)
- 1 NO
 - 2 YES
42. Have you ever been inside a double-wide mobile/manufactured home? (circle number)
- 1 NO [If NO, go to question # 45]
 - 2 YES [If YES, continue]
43. Approximately how long ago were you last inside one? _____ YEARS
(If less than 1 year, answer 0).
44. What condition was that unit in? (circle number)
- | | | | | |
|----------|-----|----|------|-----------|
| VERY BAD | BAD | OK | GOOD | VERY GOOD |
| 1 | 2 | 3 | 4 | 5 |
45. Do you consider yourself knowledgeable about double-wide mobile/manufactured home characteristics, advantages, disadvantages, and/or general design features?
- 1 VERY KNOWLEDGEABLE
 - 2 SOMEWHAT KNOWLEDGEABLE
 - 3 AVERAGE KNOWLEDGE
 - 4 LITTLE KNOWLEDGE
 - 5 NO KNOWLEDGE AT ALL
46. Is your neighborhood composed mostly of? (circle number)
- 1 HOUSES
 - 2 APARTMENTS
 - 3 MOBILE or MANUFACTURED HOMES
 - 4 MIXTURE OF HOUSES and MOBILE/MANUFACTURED HOMES
 - 5 MIXTURE OF ALL THE ABOVE TYPES OF RESIDENCES

47. Is your neighborhood located? (*circle number*)

- 1 WITHIN TOWN LIMITS
- 2 RIGHT OUTSIDE THE TOWN LIMITS
- 3 OUT IN THE COUNTRY

48. How many people live in your community or town? (*circle number*)

- 1 LESS THAN 1,000 PEOPLE
- 2 BETWEEN 1,000 AND 10,000 PEOPLE
- 3 BETWEEN 10,001 AND 20,000 PEOPLE
- 4 BETWEEN 20,001 AND 50,000 PEOPLE
- 5 MORE THAN 50,000 PEOPLE

49. How long have you lived in this neighborhood? (*circle number*)

- 1 LESS THAN 1 YEAR
- 2 BETWEEN 1 AND 5 YEARS
- 3 BETWEEN 6 TO 10 YEARS
- 4 BETWEEN 11 AND 20 YEARS
- 5 BETWEEN 21 AND 30 YEARS
- 6 MORE THAN 30 YEARS

50. What type of housing best describes the dwelling you currently live in?
(*circle number*)

- 1 A HOUSE
- 2 APARTMENT
- 3 TOWNHOUSE OR DUPLEX
- 4 OTHER, specify: _____

51. Do you presently ? (*circle number*)

- 1 OWN your home
- 2 RENT your home
- 3 OTHER, specify: _____

52. If you OWN your home, what would you estimate your house and lot would sell for today? (*circle number*)

- 1 LESS THAN \$50,000
- 2 \$ 50,001 -- \$100,000
- 3 \$100,001 -- \$150,000
- 4 \$150,001 AND ABOVE

For each of the following statements, please indicate the extent to which you AGREE OR DISAGREE with the statement; IF Double-wide MOBILE/MANUFACTURED HOMES WERE LOCATED IN YOUR NEIGHBORHOOD: (circle one number for each statement)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
53. Property values in the neighborhood would increase.....	1	2	3	4
54. Traffic would increase in volume throughout the area.....	1	2	3	4
55. I would feel more satisfied with the neighborhood.....	1	2	3	4
56. Some residents would sell their homes and move away.....	1	2	3	4
57. The social image of the neighborhood would be better.....	1	2	3	4
58. More noise would be created.....	1	2	3	4
59. The quality of the neighborhood would be better.....	1	2	3	4
60. They would create a stronger residential character.....	1	2	3	4
61. They would attract desirable residents.....	1	2	3	4
62. They would create or maintain a safe environment for my family and myself.....	1	2	3	4
63. They would make property taxes go down	1	2	3	4
64. They would make the neighborhood look attractive.....	1	2	3	4
65. They would fit very well into the social and physical character of this neighborhood.....	1	2	3	4

66. In general how do you feel about locating a double-wide mobile/manufactured home in your neighborhood? *(circle number)*

- 1 STRONGLY OPPOSE
- 2 MILDLY OPPOSE
- 3 NEITHER OPPOSE NOR FAVOR
- 4 MILDLY FAVOR
- 5 STRONGLY FAVOR

67. Are you? *(circle number)*

- 1 MALE
- 2 FEMALE

68. In what year were you born? _____

69. Highest level of education you achieved: *(circle number)*

- 1 NONE OR SOME GRADE SCHOOL (none, or grades 1 through 8)
- 2 SOME HIGH SCHOOL (grades 9 thru 12)
- 3 HIGH SCHOOL GRADUATE OR EQUIVALENT (GED)
- 4 SOME COLLEGE OR VOCATIONAL SCHOOL beyond high school
- 5 COMPLETED a VOCATIONAL TRAINING Program beyond high school
- 6 COMPLETED a 2-YEAR COLLEGE DEGREE
- 7 COMPLETED a 4-YEAR COLLEGE DEGREE
- 8 COMPLETED a GRADUATE OR PROFESSIONAL DEGREE

70. Your employment status is: *(circle number)*

- 1 FULL TIME job or at least in 2 part-time jobs
- 2 PART-TIME job
- 3 RETIRED
- 4 HOMEMAKER
- 5 UNEMPLOYED
- 6 STUDENT (part-time job or unemployed)

71. Your race and ethnic background is: *(circle number)*

- 1 BLACK / AFRICAN AMERICAN
- 2 WHITE / CAUCASIAN (not of Hispanic origin)
- 3 HISPANIC / LATINO
- 4 NATIVE AMERICAN / INDIAN
- 5 ASIAN / PACIFIC
- 6 OTHER: (please specify) _____

72. Your home is composed of or occupied by: (circle number)

- 1 SINGLE PERSON(s)
- 2 COUPLE (s) WITH NO CHILDREN
- 3 A SMALL SINGLE-PARENT FAMILY (2 to 3 members)
- 4 A SMALL TWO-PARENT FAMILY (3 to 4 members)
- 5 A LARGE SINGLE-PARENT FAMILY (4 or more members)
- 6 A LARGE TWO-PARENT FAMILY (5 or more members)

73. Which of the following ranges of income best represent your household's total annual income? (please consider all sources of income from all contributing adults, such as wages, salaries, tips, social security, retirement income, investment income, child support, alimony, welfare, etc):

- 1 LESS than \$5,000
- 2 \$5,000 to \$14,999
- 3 \$15,000 to \$19,999
- 4 \$20,000 to \$24,999
- 5 \$25,000 to \$34,999
- 6 \$35,000 to \$44,999
- 7 \$45,000 or GREATER

For each of the following statements, indicate the extent to which you AGREE OR DISAGREE with the statement (circle one number for each statement)

STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
-------------------	-------	----------	----------------------

74. The majority of the residents in my neighborhood are socially alike and have similar social characteristics..... 1 2 3 4

75. The majority of the houses or residences in my neighborhood are similar in terms of physical appearance, size, and price range..... 1 2 3 4

Is there anything else you would like to share about what you think of double-wide mobile/manufactured homes? If so, please use this space for that purpose.

THANK YOU FOR YOUR TIME AND CONTRIBUTION TO THIS STUDY.
Please return this survey using the enclosed, stamped envelope.

APPENDIX B Cover Letter



Department of Housing, Interior Design and
Resource Management

College of Human Resources
Blacksburg, Virginia 24061-0424
(540) 231-6163 Fax: (540) 231-3250

May 1, 1995

1 -

Housing prices throughout the nation have escalated dramatically in the past few decades and many Virginians can no longer afford the American Dream of a home of their own. Housing experts suggest that manufactured homes, formerly known as mobile homes, provide one alternatives to the current housing affordability crisis. However, no one really knows how people in communities like yours feel about manufactured homes.

Your household is part of a small group of randomly-selected persons chosen to give opinions about manufactured homes. In order that the results will truly represent the thinking of residents in your county, it is important that each questionnaire be returned to us completed by an adult head of household. This brief questionnaire will take only 10 to 15 minutes of your time. Please note that if you currently reside in a mobile/manufactured home you shall return the **blank** questionnaire in the enclosed envelope and check "X" in the space provided on the cover.

You are guaranteed complete confidentiality. The questionnaire has an identification number for mailing purposes only. This is so that we may check your name off the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire. The results of this study will be made available to state and local housing officials and any interested citizens who request them.

If you have any questions, please do not hesitate to call or write us. Our telephone number is (703) 231-4784. Thank you for your valuable assistance.

Sincerely,

A handwritten signature in cursive script that reads "Rosemary C. Goss".

Rosemary C. Goss, Ph.D.
Associate Professor

A handwritten signature in cursive script that reads "Julia O. Beamish".

Julia O. Beamish, Ph.D.
Associate Professor

APPENDIX C
One-Week Follow-Up Postcard

May 8, 1995

Last week a questionnaire seeking your opinion about manufactured homes was mailed to you. Your name was drawn in a random sample of households residing in selected counties in the state of Virginia.

Please accept our sincere gratitude if you already completed and returned it to us. If not, please do so today. This questionnaire was sent to only a small, but representative sample of Virginians, thus it is important that your completed questionnaire be included in the study if the results are to accurately represent the opinions of Virginia residents.

If you did not receive the questionnaire or it was misplaced, please call us right now, (703-231-4784) and we will mail another copy to you today.

Sincerely,

Rosemary C. Goss, Ph.D.
Associate Professor

Julia O. Beamish, Ph.D.
Associate Professor

APPENDIX D
Second Follow-Up Letter



**Department of Housing, Interior Design and
Resource Management**

College of Human Resources
Blacksburg, Virginia 24061-0424
(540) 231-6163 Fax: (540) 231-3250

May 23, 1995


1 ~


About three weeks ago we sent you a survey to gather your opinions about mobile/manufactured homes and how you feel about the presence of this type of housing in your area. As of today we have not received your completed questionnaire.

The opinions of Virginians are important and should be incorporated into the planning process for community development, urban and rural growth, and the overall well being of Virginia residents. We are contacting you once again because of the importance that each completed questionnaire has to the success and usefulness of this research study. You are part of only 2,000 households selected from Virginia to respond to this survey. Again, the results of this study can be representative of the opinions of Virginians **only** if each person in the sample returns the questionnaire.

We have enclosed a replacement questionnaire in case yours has been misplaced. Your contribution to the success of this study will be greatly appreciated.

Sincerely yours,


Rosemary C. Goss, Ph.D.
Associate Professor


Julia O. Beamish, Ph.D.
Associate Professor

P.S. The number of returns received so far is encouraging. Some of you have asked if the person to whom the questionnaire was mailed must be the one to respond. The answer is no. Any adult household member may respond.

APPENDIX E

Measurement of Variables

Respondent's Socioeconomic Status

This construct was measured through the following variable:

Housing value. Measured by the following question for respondents who are homeowners.

Q: If you own your own home, what would you estimate your house and lot would sell for today?

A: (1) less than \$50,000; (2) \$50,001 -- \$100,000; (3) \$100,001 -- \$150,000; or (4) \$150,001 and above.

Respondent's Demographic Characteristics

This construct was measured through the following variables:

Gender. Measured by answers to the following question:

Q: Are you?

A: (1) Male; (2) Female

Age. Measured by the following question:

Q: In what year were you born?

Household size and composition. This composition is based on the number of household members and the type of head of household. This variable was measured by the score of the following question:

Q: Your home is composed of or occupied by:

A: (1) single person(s); (2) couple(s) with no children; (3) A small single-parent family (2 to 3 members); (4) A small two-parent family (3 to 4 members); (5) A large single-parent family (more than 3 members); or (6) A large two-parent family (5 or more members).

Race/ethnicity. Measured by answers to the following question:

Q: Your race and ethnic background is?

A: (1) black/African-American; (2) White/Caucasian (not of Hispanic origin); (3) Latino/Hispanic; (4) native-American/Indian; (5) Asian/pacific islander; (6) other (specify).

Respondent's Innovativeness

This construct was measured through the Innovativeness Toward Housing scale as adapted (Gruber, et al, 1990). This personality trait may have an influential effect on outcome regarding acceptance of manufactured homes.

Personal innovativeness. This variable was measured through the use of the Gruber, et al (1990) adapted Innovativeness Toward Housing instrument on a four-point Likert type scale. A 26-item scale which had been used to assess innovativeness toward manufactured homes among other types of housing (see Appendix A, questions 13 through 38 of instrument). Its purpose was to predict acceptance toward alternative housing such as manufactured homes. Higher means scores will be associated with greater levels of innovativeness therefore, acceptance of manufactured homes. Positively-stated questions (see Appendix A, questions 14-18, 23-25, 30, 31, 33, 34, 37, and 38 of instrument) were recoded for the purpose of establishing the overall innovativeness score for each respondent. Using the Statistical Package for Social Sciences for Personal Computers (SPSS/PC+) Version 4.0, *t*-tests were conducted to determine if there were significant differences in the mean scores of the single-section sample group and the double-section sample group.

Respondent's Knowledge about Manufactured Homes

Measured by the following variable:

Extent of knowledge about manufactured homes. Refers to how much information does the respondent has about mobile/manufactured homes in his area or in general. Will be measured by the scores of answers to the following question:

- Q: Do you consider yourself knowledgeable about (single-wide) (double-wide) mobile/manufactured home characteristics, advantages or disadvantages, and general design features?
- A: (1) Very knowledgeable; (2) Somewhat knowledgeable; (3) Average knowledge; (4) Little knowledge; or (5) no knowledge at all.

County Characteristics

Percentage of existing manufactured homes in the county. A dichotomous continuous variable coded "1" for low percentage and "2" for high percentage of manufactured homes per county. This variable is not measured through the survey instrument; instead the researcher used census data as shown in Table 1 pertaining to the percentage of mobile homes, trailers, and other per selected county. Each of the four regions (i.e., Central, Southside, Southwest, and Golden Crescent) was divided into two counties; one with the highest and another with the lowest percentage of existing manufactured homes.

Perceived Characteristics of Manufactured Homes

Type of manufactured home. Refers to the characteristics associated with the two more prominent types of manufactured housing: single-section and double-section structures. A dichotomous variable where manufactured home units will be categorized into ratings of 1 = single-wide and 5 = double-wide.

Manufactured home appearance/conditions. Refers to the conditions, and thus image, that characterize manufactured housing in the respondent's community. Condition of the structure will be measured by:

Q: The appearance and condition of most (single-) (double-) wide mobile/manufactured homes in this county is?

A: (1) very bad; (2) bad; (3) OK; (4) good; or (5) very good.

Perceived Characteristics of Manufactured Home Occupants

Perceived manufactured home household social behavior. This variable was measured in terms of how the community residents perceived manufactured home households' typical behavior. They were asked to respond to the following:

Q: The behavior displayed by most (single-) (double-) wide mobile/manufactured home residents in terms of social conduct, cleanliness, and respect for the community is likely to be:

A: (1) very bad; (2) bad; (3) OK; (4) good; or (5) very good.

Perceived Neighborhood Physical Structure

Neighborhood physical homogeneity level. Refers to the respondents level of agreement with the perception of similarities among the houses or residential structures in their neighborhoods.

Q: The majority of the houses or residences in my neighborhood are similar in terms of physical appearance, size, and price range.

A: (1) strongly agree; (2) agree; (3) disagree; or (4) strongly disagree

Perceived Neighborhood Social Structure

Perceived neighborhood social homogeneity level. Respondent's opinion about the social structure on the neighborhood.

Q: The majority of the residents in my neighborhood are socially alike and have similar social characteristics.

A: (1) strongly agree; (2) agree; (3) disagree; or (4) strongly disagree

Measurement of Variables not Included in the Statistical Model:

Respondent's Socioeconomic Status

Income level. Refers to the income level of the respondents. Measured by scores from the responses to:

- Q: Which of the following ranges of income best represents your household's total annual income? (Please consider all sources of income from all contributing adults, such as wages, salaries, tips, social security, retirement income, investment income, child support, alimony, welfare, etc.)
- A: (1) less than \$5,000; (2) \$5,000 to \$14,999; (3) \$15,000 to \$24,999; (4) \$20,000 to \$24,999; (5) \$25,000 to \$34,999; (6) \$35,000 to \$44,999; or (7) \$45,000 or greater.

Educational level. Refers to the level of education of respondents:

- Q: Highest level of education you achieved?
- A: (1) none or some grade school (grades 1 through 8); (2) some high school (grades 9 through 12); (3) high school graduate or equivalent; (4) some college or vocational school beyond high school; (5) completed a vocational training program beyond high school; (6) completed a 2-year college degree; (7) completed a 4-year college degree; (8) completed a graduate or professional degree.

Employment status. Measured by the following question:

- Q: Your employment status is:
- A: (1) full-time (or at least in 2 part-time jobs); (2) part-time job; (3) retired; (4) homemaker; (5) unemployed; (6) Student (part-time job or unemployed)

Housing type. Measured by the following question:

- Q: What type of housing best describe the dwelling you live in?
- A: (1) A house; (2) apartment; (3) townhouse or duplex; (4) other.

Housing tenure status. Refers to the type of tenure that the respondents have. Measured by scores from the responses to this question:

- Q: Do you presently?
- A: (1) own your home; (2) rent your home; or (3) Other: (specify)

Respondent's Knowledge about Manufactured Homes

Familiarity with manufactured homes. Refers to how much information did the respondent have about mobile/manufactured homes in his area or in general.

Measured by the scores of answers to the following questions:

- Q: Have you ever lived in a (single-wide) or (double-wide) mobile/manufactured home?
A: (1) no; or (2) yes
- Q: Do you know someone who is or has been living in a (single-wide) (double-wide) mobile/manufactured home?
A: (1) no; or (2) yes
- Q: Have your ever been inside a (single-wide) (double-wide) mobile/manufactured home?
A: (1) NO; or (2) YES
- Q: Approximately how long ago were you last inside one?
A: _____ years (if less than 1 year, answer 0)
- Q: What condition was that unit in?
A: (1) very bad; (2) bad; (3) OK; (4) good; or (5) very good

Closeness to manufactured homes. Refers to the respondent's perception of closeness or distance from his or her residence to a mobile/manufactured house. Will be measured by the following:

- Q: 1990 census data indicates that (single-wide) (double-wide) mobile/manufactured homes exist in your county; please indicate, approximately, how close do you live from any of them?
A: (1) Very close (next to or less than 1 mile away); (2) Close (between 1 and 3 miles); (3) Not close/not far (between 3 and 5 miles); (4) Far (between 5 and 10 miles); (5) Very far (more than 10 miles away); (6) Don't know.

Perceived Characteristics of Manufactured Homes

Foundation type. Refers to the issue of mobility or "instability" often associated with mobile homes. Measured by assessing the type of foundation most mobile homes have in the respondent's community.

- Q: Most (single-) (double-) wide mobile manufactured homes in this county are placed on:
A: (1) A provisional foundation (on axles and wheels); (2) A block foundation and may be skirted; (3) A permanent foundation (made out of blocks or bricks); (4) Don't know.

Manufactured home location/neighborhood type. Location refers to the specific placement of the majority of manufactured homes in the respondent's community. Measured by assigning scores to locational alternatives:

Q: Most (single-) (double-) wide mobile/manufactured homes are likely to be located in:

A: (1) mobile home/trailer parks; (2) mobile home subdivisions; (3) residential neighborhoods; or (4) Farms or agricultural land, isolated from other residences.

Age of structures/year built. Refers to the perceived year of construction for most of the manufactured/mobile home units in the community. This variable was expected to correlate with other two variables: MH appearance and type. Because units built before 1976 were not built to meet HUD codes and standards, many assumptions could be made regarding how these units are perceived by community residents. Measured by the following question regarding perceived age:

Q: Most (single-) (double-) wide mobile/manufactured homes in this county are likely to be:

A: (1) older than 20 years; (2) around 10 years old; (3) new or around 5 years old; (4) don't know.

Perceived Characteristics of Manufactured Home Households

Perceived manufactured home occupants' origin. Refers to perceptions about the origin of manufactured home occupants. Measured by the following question:

Q: Most (single-) (double-) wide mobile/manufactured home residents are likely to be:

A: (1) local people; (2) new people/outside; (3) don't know

Perceived manufactured home household composition. Refers to the community residents' perceptions about the composition of mobile/manufactured households. This composition is based on the number of household members and the type of head of household. Measured by the score of the following question:

Q: Most (single-)(double-) wide mobile/manufactured homes are likely to be occupied by:

A: (1) single person(s); (2) couples with no children; (3) Small single-parent families (2 to 3 members); (3) Small two-parent families (3 to 4 members); (4) large single-parent families (more than 3 members); or (5) large two-parent families (5 or more members).

Perceived housing tenure status. Refers to the type of tenure the occupants of mobile/manufactured homes had in the community as perceived by the community residents. Measured by scores from the responses to this question:

Q: Most (single-) (double-) wide mobile/manufactured home residents:

A: (1) Own their homes and land; (2) Rent their homes and land; (3) Own their homes and rent the land.

Perceived manufactured home household income levels. Refers to the perceived income level of most mobile/manufactured home households in the community. Measured by scores from the responses to, according to type of manufactured home:

Q: Most (single-) (double-) wide mobile/manufactured home residents are likely to be:

A: (1) Rich/well off; (2) Middle class; (3) Low income; (4) Poor, very low income.

Perceived manufactured home household educational levels. Refer to the level of education of mobile/manufactured home residents as perceived by community residents:

Q: In terms of education, most (single-) (double-) wide mobile/manufactured home residents have:

A: (1) none or some grade school (grades 1 through 8); (2) some high school (grades 9 through 12); (3) high school graduate or equivalent; (4) some college or vocational school beyond high school; (5) completed a vocational training program beyond high school; (6) completed a 2-year college degree; (7) completed a 4-year college degree; (8) completed a graduate or professional degree.

Perceived manufactured home household employment status. Measured by the following question:

Q: In terms of employment most (single-) (double-) wide mobile/manufactured home residents are likely to be:

A: (1) in a full-time jobs (or at least in 2 part-time jobs); (2) in part-time jobs; (3) Retired; (4) homemakers; (5) unemployed; or (6) students (in part-time jobs or unemployed).

Perceived racial composition of manufactured home households. Refers to the race of most mobile/manufactured home occupants as perceived by community residents. Measured as follows:

Q: In terms of racial composition, most (single-) (double-) wide mobile/manufactured home residents are likely to be:

- A: (1) black/African-American; (2) White/Caucasian (not of Hispanic origin); (3) Latino/Hispanic; (4) native-American/Indian; (5) Asian/pacific islander; (6) other (specify).

Perceived Manufactured Home Impacts on the Neighborhood

Perceived manufactured home impacts. Refers to respondents' perceptions about the potential impact that single- or double-section manufactured housing would have if located in their neighborhoods. It was measured through the use of 12 statements concerning potential manufactured housing impacts. These statements were adapted by the researcher from statements dealing with mental health facilities impacts as used by Dear and Taylor (1982). The respondents were asked to give their opinion about each statement on a four-point Likert type scale ranging from strongly agree to strongly disagree. All twelve scores were added up to create a total score for each respondent. Higher scores were used by the researcher to indicate higher negative perceptions about manufactured housing impacts in a neighborhood.

Q: For each of the following statements, please indicate the extent to which you AGREE or DISAGREE with the statement; If (single-) (double-) wide mobile/manufactured homes were located in your neighborhood:

- S:
- Property values in the neighborhood would increase.
 - Traffic would increase in volume throughout the area.
 - I would feel more satisfied with the neighborhood.
 - Some residents would sell their homes and move away.
 - The social image of the neighborhood would be better.
 - More noise would be created.
 - The quality of the neighborhood would be better.
 - They would create a stronger residential character.
 - They would attract desirable residents.
 - They would create or maintain a safe environment for my family and myself.
 - They would make property taxes go down.
 - They would make the neighborhood look attractive.

Perceived Manufactured Home Fit in the Neighborhood

Perceived manufactured home fit in the neighborhood. Respondents perceptions as to their neighborhoods' fit for (single-) (double-) wide manufactured homes. Measured by one statement on a four-point Likert type scale, ranging from strongly agree to strongly disagree. Higher scores were associated with higher perceptions about neighborhood fit for manufactured housing.

- Q: For the following statement, please indicate the extent to which you AGREE or DISAGREE with the statement; If (single-) (double-) wide mobile/manufactured homes were located in your neighborhood:
- S: - They would fit very well into the social and physical character of this neighborhood.

Perceived Neighborhood Physical Structure

Land use mix. Measured by scores from perceived land uses in the area.

- Q: Is your neighborhood composed mostly of?
- A: (1) houses; (2) apartments; (3) mobile or manufactured homes; (4) mixture of houses and mobile/manufactured homes; (5) mixture of all the above types of residences.

Neighborhood location. Perceived location of the respondent's neighborhood in relation to the boundaries of a town or city. Often manufactured homes are more strictly regulated (particularly in terms of foundation type and unit size) when they are to be placed within city or town limits.

- Q: Is your neighborhood located?
- A: (1) within town limits; (2) right outside town limits; (3) out in the country.

Neighborhood size. Measured by scores of perceived size of respondent's community (including their neighborhoods) through the following question:

- Q: How big do you perceive your community to be?
- A: (1) Less than 1,000 people; (2) Between 1,000 and 10,000 people; (3) Between 10,001 and 20,000 people; (4) Between 20,001 and 50,000 people; (5) More than 50,000 people.

Perceived Neighborhood Social Structure

Perceived neighborhood belonging. Measured by the amount of years the respondent has lived in their current neighborhood.

- Q: How long have you lived in this neighborhood?:
- A: (1) less than 1 year; (2) between 1 and 5 years; (3) between 6 and 10 years; (4) between 11 and 20 years; (5) between 21 and 30 years; (6) more than 30 years.

APPENDIX F
Respondents Comments About Manufactured Housing

The following is a sample of comments which represent some of the sentiments held by residents of selected rural areas in Virginia. The researcher obtained a total of 168 comments; that is, 30.43% of the total sample ($N = 552$). In specific, 83 respondents commented on single-section units and 85 respondents commented on double-section units. Of this total, there were 10 respondents who commented about the survey and not about manufactured housing. For the sake of space, comments that repeated the same theme or sentiment were not included in this summary.

Comments About Single-Section Manufactured Housing

"A great affordable way of living."

"After living in a single wide once, I wish our house was designed to use as much storage space as is available in a mobile home."

"I have had adult children and numerous friends who lived in manufactured homes and they found them very satisfactory for meeting their needs at the time that they lived there."

"If you are talking about regular mobile homes I suppose they are all right."

"I have been in several single wide homes. They are lovely. I could live the rest of my life out in one as nice as my daughters & her's is in medium range price!"

"I believe that Modular Homes are a good alternative to the cost of housing. At the same time I believe that higher standards should be required in the manufacturing and use of."

"In our community mobile homes are very useful for young couples that have married or for anyone just starting out. Cost of living is reduced for this part of our community. Thank you."

"May be alright for starter home."

"The average single wide mobile/manufactured home is a fire hazard, due to the type of material they are constructed from. Manufactured homes should be made to comply with same building code as stick built homes, and built with same quality."

"My own preference is not a mobile home but, for lots of people who can't do any better I'm sure it makes them feel good just to be able to own something they can call their own. I'm not totally against mobile homes, I think there should be a place where people can put their home (mobile home) like in a park or something. Everyone deserves a chance, and to feel good about themselves. This is what keeps some low income people from giving up and becoming welfare candidates. It's hard to be positive if you have nothing to work for!"

"No objection to good clean trailers in neighborhood."

"With the economy as it stands at the present, there are many young families trying to establish a home and finding it very difficult with low incomes and high housing. I believe single-wide mobile homes are ideal starting points for these individuals and should not be objected to; politically or socially."

"I owned one as a young single woman, it was affordable at the time for me and a very nice home. I would buy one again if something were to happen to my home. It is getting to the point that people can not afford a real house and mobile homes are the solutions; and there is nothing wrong w/ that."

"I feel that mobile homes should be in mobile home parks, or on a lot in the county or country by themselves, not in residential neighborhood beside a house."

"They should all be in a park for trailer."

"Mobile homes should be used for travel purposes only! And if an individual can not afford a better type of home - they was not raised properly! If you understand that!! Think about it - for a while!"

"They are poorly built, waste money and natural resources, look awful and many end up unlivable after a few years and are abandon around the county. They are however better than a paper shack with no plumbing. (The usual alternate)"

"We deliberately sought a building lot in a restricted neighborhood. No mobile homes or manufactured homes."

"I think they belong in mobile home parks- I do not think they should be mixed in with regular residential neighborhoods. I do not have anything against people who live in mobile homes but the two types of housing are not compatible in the same neighborhood."

"Many mobile homes in our county are well-kept and very nicely landscaped. The only draw-backs to mobile homes in our area are that people will buy several old, damaged mobile homes crowd them into a small lot, rent to welfare department, provide no up-keep in appearance, and often attract mainly people who take no pride in their home- its safety or its appearance."

"In my opinion mobile homes are a poor investment i.e., do not appreciate in value."

"The desirability of these houses depends more upon the quality of the people than the home itself."

"I was a member of the Pulaski Fire Department for 9 years and saw only one single wide home saved out of about 20 that caught fire at that time but I do know the old type furnace is no longer in use and the material inside was very flammable, I do not know is this is now is use."

"They are put together cheaply & depreciate very fast. There is never enough room or storage space in them. The furniture and appliances that are put in them are either very cheap or are of poor quality. They are expensive for what you get out of them. Also, when a person moves, the whole trailer shakes. The people that usually live in them are fat and sloppy, with the exception of a few that are skinny, and they do not have much common sense. They especially do not have any morals. In this area, quite a few military people live in them. The majority are ignorant fat people with no morals or respect for other people."

Comments About Double-Section Manufactured Housing

"I don't like manufactured homes because of their impersonal nature, however I realize that this type of housing may be necessary to insure access to adequate shelter for certain segments of the population."

"There is a difference between modular such as Mod-V-Craft or Continental Homes and homes built on a metal chassis. I prefer the modular type construction that is paled on a permanent foundation and is taxed as real estate rather than personal property."

"I don't mind a mobile home in my community as long as they are kept in good condition & neat. Everyone can't afford a house."

"Some of the questions are difficult to answer because I have seen some very nice and some poor double-wide homes. There are several manufactured home in my neighborhood that are very nice looking and they have added features to the outside to enhance the appearance. Since I have limited knowledge on these types of homes, so this also made it difficult to know the structure quality of the home."

"When you think about the price of building a new home, a double-wide is the only nice home that most low to middle-income people can afford."

"I see nothing wrong with these type of homes. Young couples would have a better chance of having a home than if they had to build. As long as the homes are kept clean and taken care of they are OK in our book."

"We would like to have one of our own in the near future. We find them very sufficient and economical to meet our needs."

"I have seen some very nice double wides."

"Mobile homes are OK if they are safe, clean and well kept."

"Some people, no matter what their color [is], cannot afford to do any better in order to live in housing that meets safety & quality standards. The major most majority of double-wides in my county are very nice looking & look better than some more permanent stick-built homes."

"The aesthetic value and wear over years is the most disturbing factor. They don't seem to hold up."

"I see nothing wrong with a double-wide -- I was real pleased to see my own son get a double-wide, he has added on a new room the house looks real attractive There is no wasted space in this type housing."

"When properly installed and maintained they are as good a home as any and many people especially the young couples can't afford to do any better, starting out. There acceptance in any neighborhood depends on how they are kept up."

"While mobile homes provide a reasonably affordable and reasonable attractive form of housing they are by nature a short term solution, short life span and depreciate in value. How does an out of date, unuseful mobile home fit in or disposed of? There are other alternatives that should be explored."

"The inside finishing work could be improved and the use of better materials in order to make the inside appear more attractive and larger."

"Strong advocate of affordable double-wide homes on permanent foundations. Strongly opposed to single wide with wheels, blocks or skirting placed on a bulldozed red clay area of ground with rusted vehicles and a West Virginia wild flower outside- We call it Hokie Housing!!"

"Now mobile homes start out fine but seem to eventually fall apart and overtime get worse rather than improve! There are too many junky ones around that people pick up cheaper & they look & attract the wrong class of people. The new ones today will leave more junky ones for later. They don't seem to appreciate in value & no one seems to dispose of the old ones - they become eye sores...very different than how they may have started out!"

"In this county -"double-wide" is not the issue- most of working class can not afford them- Single wide's are most in use- The problem is that they depreciate in value and do not produce enough income for the county in taxes to offset the cost of government services they require."

"A double-wide can look better than some conventional homes, with proper landscaping. My concern is the quality of materials used in making a double-wide. On the inside they are cheaply made, no better than a regular trailer. There is no substitute for a quality built home, one that will increase with time rather than decrease in value. The popularity with double-wides is another example of our desire to get what we want right away rather than taking the time to work with quality builder."

"Mobile homes depreciate in value so taxes decrease. An then an increase on homeowners whose values increase. Most residents of mobile homes and parks have less desirable living traits."

"Limited exposure to mobile or "prefab" homes indicates inferior structure or workmanship, poor quality, and generally undesirable characteristics. Would not consider buying one in any of my properties."

"Mobile manufactured housing is not an answer to affordable housing. This type of housing cheapens the neighborhood, socially, character-ability and invites unacceptable people."

"Re-sale value is not good."

"I purchase two in 1987 and put them on my farm for rental property. Poor roof construction plumbing and fixtures, will last 20 to 25 years, then they will not be worth."

VITA

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PERSONAL DATA:

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EDUCATION:

1990 to 1995: **Doctor of Philosophy in Housing**, Completion date: Fall 1995.
Virginia Polytechnic Institute and State University, Blacksburg. Dissertation topic:
Manufactured Housing: An assessment of community attitudes.

1988 to 1990: **Master of Urban and Regional Planning**. Virginia Polytechnic
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Atiles, J. H. (1990). *Homelessness and Housing-Relief Services in Montgomery
County, Virginia*. Unpublished Practicum Project.

1981 to 1986: **Bachelor of Architecture**, Cum Laude. Universidad Nacional Pedro
Henríguez Ureña, Santo Domingo, D.R.

Atiles, J. H. & Manosalvas, M. N. (1986). *Palmar de Ocoa: Proyecto Villas
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bachelor's thesis.

TEACHING EXPERIENCE:

Spring 1993: **Temporary Instructor, Housing Alternatives-HCE 571/771**, College
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Spring 1992: **Instructor, House Planning & Design-HIDM 2604**, College of Human
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Tech, Blacksburg.

Fall 1990 to Spring 1992: **Graduate Teaching Assistant**, Virginia Tech, Blacksburg.

RESEARCH EXPERIENCE:

June 1993 to January 1994: **Research Assistant**, The University of Georgia's
Housing Research Center.

August 1991 to May 1992: **Graduate Research Assistant**, for the Virginia Center for Housing Research, Virginia Tech, Blacksburg.

Summer 1991: **Research Assistant**, for Prince William County, Virginia Cooperative Extension Service. Homelessness Prevention Through Financial and Social Counseling. Duties: Research of literature.

Summer 1991: **Research Specialist**, Virginia Cooperative Extension Service. Home-Based Business Survey. Duties: Data coding & analyses.

HOUSING & COMMUNITY DEVELOPMENT EXPERIENCE:

July 1995 to present: **Housing Manager**, Unified Government of Athens-Clarke County, Georgia; Human & Economic Development Department.

January 1994 to July 1995: **HOME Coordinator/Acting Housing Manager**, Unified Government of Athens-Clarke County, Georgia; Human & Economic Development Department.

April 1993 to January 1994: **Research Assistant**, Housing Research Center of the University of Georgia.

August 1986 to June 1988: **Project Analyst**, FHA Department, Banco Nacional de la Vivienda (National Housing Bank), D.R.

PUBLICATIONS:

Shelton, G. G. & Atilas, J. H. (in press). A qualitative approach for assessing receptivity to federal housing initiatives: The focus group technique. *Housing and Society*.

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Koebel, C. T. & Atilas, J. H. (1992). *Addressing housing affordability problems through property tax relief in Virginia*. Blacksburg: Virginia Polytechnic Institute and State University, Virginia Center for Housing Research.

UNPUBLISHED RESEARCH REPORTS:

Atilés, J. H., Burton, P. G., Huang, S., Sadagopan, R.S., & Sarkar, R.S. (1989, Fall). *Resource guide for community involvement in water quality protection in Pulaski County, Virginia*. Unpublished report, Virginia Polytechnic Institute & State University, Department of Urban Affairs & Planning, Blacksburg.

Atilés, J. H., Munger, H., & Sadagopan, R. S. (1989, Spring). Environmental Impact Analysis. In Planning Studio I. *Tom's Creek development study: Final report*. Unpublished report presented to the Town of Blacksburg Planning Commission.

POSTER SESSIONS:

Atilés, J. H. (1994, October). *Vision 2004: Athens-Clarke County, Georgia enterprise community application and related plans and programs*. Poster session presented at the annual meeting of the American Association of Housing Educators, Atlanta, GA.

HONORS:

June 1988 to May 1990: **Scholarship Recipient**, from the United States Agency for International Development.

November 1986: **Certificate of Merit**, Dominican Foundation of Universities. **Silver Medal**, from the Universidad Nacional Pedro Henríquez Ureña, recognizing the valedictorian of the 1986 graduation class, Santo Domingo, D. R.

SIGNATURE:


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