

## Not a Trailer Anymore: Perceptions of Manufactured Housing

Julia O. Beamish and Rosemary C. Goss  
*Virginia Polytechnic Institute and State University*

Jorge H. Atilas  
*University of Georgia*

Youngjoo Kim  
*Virginia Polytechnic Institute and State University*

### *Abstract*

Manufactured housing, commonly called mobile homes or trailers, offers an affordable housing alternative for many low- and moderate-income households. Although such housing is built to U.S. Department of Housing and Urban Development standards, local communities and states often regulate placement. This article reports on a state-wide study that profiled Virginia residents of single-section and double-section manufactured housing and compared their perceptions of that housing with the perceptions of other community residents.

Double-section residents had more education and higher incomes and were more likely to own their home and the land it was on than single-section residents. Community residents had persistently negative opinions about the impact of manufactured housing on their community. Given the many challenges communities and the manufactured housing industry face in using these units to provide low-cost housing, negative impressions, such as poor design, aging units, and “trailer” parks, must be addressed to improve acceptance.

**Keywords:** Affordability; Local; Manufactured housing

### **Introduction**

While images of “newly wed or nearly dead” may once have been the typical profile of the “trailer” or “mobile home” resident, the reality is that 2 out of every 10 new home starts are manufactured housing, and new owners represent all age groups and every economic status and lifestyle. Although manufactured home residents in general are more likely to be two-person households and less likely to be college educated or have high incomes, demographic profiles vary dramatically from region to region (O’Hare and O’Hare 1993; Owens 1996).

Manufactured housing, commonly referred to as trailers or mobile homes, has become a relatively low-cost alternative to conventional stick-built houses. It can play a major role in providing safe, affordable, and

adequate single-family housing not only for limited-income home buyers and renters, but also for those of higher economic status seeking the low maintenance costs and less upkeep that manufactured home living entails (National Commission on Manufactured Housing 1994).

### *Definition of manufactured housing*

Manufactured housing refers to a specific type of factory-built housing that has been constructed and manufactured to be in compliance with U.S. Department of Housing and Urban Development (HUD) Construction and Safety Standards. Modular housing and other types of industrialized housing that are also factory built do not comply with the HUD code, but rather with local building codes. The difference in compliance results in many other differences in the distribution, local regulation, and placement of manufactured housing and other types of housing (National Association of Home Builders Research Center 1998).

Manufactured housing has several characteristics that distinguish it from modular or other types of industrialized housing. The most significant difference is that the structure is built on a chassis so that the unit is shipped on wheels rather than on a flat-bed truck. To conform to highway regulations, the HUD code regulates the length, width, and height of manufactured housing. The widths for single sections are usually 14 or 16 feet. When two of these sections are placed side by side, they form a double-section home. The combination of length, width, and height restrictions gives manufactured homes their distinctive appearance—long, narrow, and flat (Koebel 2000).

The average consumer can easily identify a single-section manufactured home and would most likely refer to it as a mobile home. Double-section manufactured homes are often more difficult to identify. If the house is located in a modest residential neighborhood with modular and stick-built ranch-style homes, it may be difficult to identify it as manufactured housing if it has a porch or deck, is landscaped, and has a foundation.

In the 1950s, the mobile home industry began to call a house trailer a mobile home to denote the reality that the trailer had become a permanent residence for many. As time passed, the industry no longer felt the term “mobile home” conveyed the image it wanted, and in 1975 the Mobile Home Manufacturers Association changed its name to the Manufactured Housing Institute. By 1980, the Manufactured Housing Institute had successfully lobbied Congress to mandate that “the term mobile home be changed to manufactured housing in all federal law and literature” (Wallis 1991, 220). Despite this mandated change in the law, the general public continues to use the term mobile home. Thus, for the purpose of this article, the terms manufactured home and mobile home will be used interchangeably.

*Federal policy perspective*

The federal government has used industrialized housing, both manufactured and modular, in a variety of programs to encourage innovations, increase the housing supply, and reduce housing costs. In 1968, HUD started Operation Breakthrough to encourage innovation in housing and increase production. The program used different types of factory-built construction in several demonstration developments. One of the problems evident in completing these developments was the many local building codes and regulations that made it difficult to develop designs that would be applicable to all localities (Wallis 1991). In 1976, the HUD Construction and Safety Standards were established to provide a consistent national building code for mobile homes. The Federal Housing Administration had been authorized to offer mortgage insurance on mobile homes and mobile home lots in 1969, and the enforcement of the HUD code allowed the terms of loans to be increased, so that they are today similar to conventional housing loans.

During the 1980s, the rising costs of housing and problems with affordability for moderate- and middle-income families prompted the creation of the Affordable Housing Demonstration Program, administered by HUD, under the Reagan administration. This program encouraged partnerships between industry and local governments to remove regulatory costs in development. The demonstration project built in Elkhart, IN, used manufactured housing. The average home in this project cost 16 percent less than the average new home in Elkhart. Most of the cost savings came from reducing the lot sizes mandated by zoning regulations by about a third and by building houses whose average square footage was reduced by one-fourth (Wallis 1991). Currently, the Partnership for Advancing Technology in Housing (PATH), a HUD-managed and -supported program, encourages new designs and amenities in manufactured housing. Their "Next Generation" house has been developed to encourage manufactured housing that local communities will accept (PATH 1999; Steven Winter Associates 1997).

The manufactured housing industry has continued to grow in response to consumer demand. The industry had its first boom in the 1970s, but declined until it bottomed out in 1991, when production levels reached a low of 170,713 units per year (Allen 1999). Since then, the industry has grown steadily: Since 1991, industry production has increased an average of 17 percent per year, up 118 percent between 1991 and 1998 (Builder Online 1999). In 1999, 348,671 homes were shipped from 323 manufacturing facilities. This amounts to 20.7 percent of all new single-family housing starts for that year (Manufactured Housing Institute 2001). Multisection shipments accounted for 64.7 percent of the total.

Industry growth can be attributed to an increase in manufactured home size and quality. In addition, the cost of housing in many areas has in-

creased dramatically, making manufactured housing a very affordable alternative to site-built housing—especially in states where manufactured homes can be placed in subdivisions (Owens 1996). Between 1981 and 1993, the percentage of manufactured housing placed on an owner's private property increased from 28 percent to 49 percent. Also, what buyers are willing to pay for manufactured housing has increased. In 1984, only 5 percent of buyers paid more than \$40,000 for a new manufactured home, compared with 24 percent in 1993 (Owens 1996). During that period, the cost of manufactured homes increased only from \$20.28 to \$23.55 per square foot (Manufactured Housing Institute 1999). This increase in expenditure suggests that more and more consumers are purchasing larger, double-section homes.

Too often, single- and double-section manufactured houses have been viewed as a single product. The HUD code defines the manufactured home product in terms of construction and safety and applies the same standard to the various types of units available. However, the industry experienced growing product diversity. The average size of homes increased 25 percent between 1985 and 1997, and the price increased, on average, 73 percent (Builder Online 1999). Recent designs for the Next Generation of Manufactured Housing, a project funded by HUD, included single- and double-section proposals (Steven Winter Associates 1997).

Even though the industry may be promoting two types of products, many local community officials and residents still view manufactured housing and the people who reside in it as homogeneous, although different from other types of housing and residents. Brown and Sellman (1987) indicated that traditional homeowners thought manufactured housing attracted transient people with unconventional lifestyles.

This article examines manufactured home residents and non-manufactured home residents in the same communities in rural Virginia to determine and compare perceptions and acceptance of manufactured housing. The residents were segmented into those who lived in single-section homes and those who lived in double-section homes. Community residents were also asked about either single- or double-section homes. The complete report of this research is available in *Perceptions of Manufactured Housing in Virginia* (Beamish and Goss 2000).

## **Review of the literature**

The literature related to manufactured housing generally examines the perceptions, preferences, and satisfaction of residents who live in it or the acceptance and perceptions of nonresidents.

### *Residents' perceptions*

In a 1990 nationwide survey of manufactured housing residents, affordability, pride of ownership, low maintenance costs, and less upkeep were cited as the major advantages of living in this type of housing (Foremost Insurance Group 1990). People chose manufactured housing because they considered it less expensive, wanted to own instead of rent, and liked the floor plan and design. It was also quick and convenient. Although the desire to move the unit was cited by 23 percent of the recent buyers of manufactured homes as one reason for purchasing their unit instead of another type of housing, the Manufactured Housing Institute states that most manufactured homes are never moved once they have been placed (Manufactured Housing Institute 2001).

A focus group study of site-built and manufactured housing residents in Georgia found that both groups had similar opinions and impressions of manufactured housing ("Focus Group Study" 1994). The main advantage was affordability; other advantages cited were expediency of purchase, availability of furnishings, flexibility of movement, and ease of design changes. The groups did not view manufactured homes as high-quality housing, and they were concerned about the homes' safety.

Housing satisfaction has frequently been used in housing research to evaluate housing types and to compare housing situations: 1995 American Housing Survey data indicate that nonmetropolitan manufactured housing residents were almost as satisfied with their homes and neighborhoods as nonmetropolitan residents of non-mobile homes were (Housing Assistance Council 1996). Manufactured home residents in nonmetropolitan areas were more satisfied (68 percent) than those in central cities (64 percent) and suburban areas (65 percent).

### *Community perceptions*

Despite the affordability advantages and resident satisfaction associated with manufactured housing, many sectors of the population oppose its use. Concerns have been raised about the safety, quality, appearance, and appreciation of manufactured housing and the impact these factors would have on neighboring property values. These concerns lead some community residents, local public officials, nonprofits, and builders to reject manufactured housing as an acceptable option for residential use, particularly when the home is to be located anywhere near them (HUD 1991). This phenomenon is what many call the NIMBY ("not in my backyard") syndrome.

The NIMBY syndrome is supported by local land-use regulations that confine manufactured housing (particularly single-section units) to mobile home parks or small-lot subdivisions and exclude 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). Recently, however, more states have recognized the role of manufactured housing as a low-cost alternative and are actively advising local governments to promote its use as a means of reaching acceptable housing affordability levels (HUD 1991; White 1996).

The literature identifies negative attitudes about manufactured housing that often center on two areas—the economic impact manufactured home communities have on the neighborhood and the types of people who live in them. Focus groups of local government officials in Michigan expressed concern that new manufactured home communities are poorly planned and will ultimately become an economic drain on the jurisdiction (Burkhardt, Mireley, and Syal 1996). When builders, lenders, real estate agents, government and nonprofit agency heads, and mobile home dealers in Southwest Virginia were asked how the people in their community would feel about having people in manufactured houses living next to them, 64 percent judged that residents would “rather not” have or would “dislike” having such neighbors (Goss, Parrott, and Engelen-Eigles 1992).

Research based on focus groups of Georgia consumers found that participants viewed manufactured home residents as lower income, less educated, and less likely to desire to succeed or improve their lives (“Focus Group Study” 1994). Manufactured home residents know that community prejudices exist. A focus group of manufactured home residents in Southwest Virginia acknowledged the fact but expressed optimism that this prejudice was decreasing because of the improved quality and appearance of manufactured housing and the increasing number of people in the area living in such housing (Goss, Parrott, and Engelen-Eigles 1992). The residents believed that prejudice against manufactured housing resulted from

1. A general prejudice against all forms of lower-income housing
2. Mobile home parks that were crowded, poorly maintained, and improperly managed, thus developing the social and physical problems typical of any densely populated area
3. Earlier-model mobile homes that looked like boxes on wheels and that all looked alike—like tin coal camp housing
4. The perception that people who were mobile—and who moved their homes—did not have roots in the community and therefore could not share the same values

5. The practice of renting mobile homes, which was associated with poor upkeep (Goss, Parrott, and Engelen-Eigles 1992).

Examples to prove these perceptions true can be found in many rural communities. Older, run-down mobile homes certainly exist, but older, run-down stick-built housing and newer, well-maintained manufactured housing can be found as well. How justified are people's perceptions of manufactured housing? Who are the people who live in manufactured homes? Do people who live with manufactured housing in their communities really know about this type of housing? How do they judge the housing and the people who live in it?

## **Purpose**

This study investigated and compared manufactured home residents' and community residents' perceptions and acceptance of single- and double-section manufactured housing as a residential alternative in rural neighborhoods. The literature reviewed in this study indicates that people who live in manufactured housing are satisfied with it, but that opposition by nonresidents affects the homes' placement and thus limits the housing choices available to limited-income households. Moreover, previous studies acknowledged the prevalent prejudice against manufactured homes and their residents. No previous study has systematically examined the attitudes of manufactured home residents and nonresidents in the same communities, nor have perceptions about single-section and double-section homes been differentiated. Consequently, this study examined who manufactured home residents were and the reasons nonresidents accept or oppose manufactured housing and the people who live in it. Because one-fifth of the 1999 single-family housing starts consisted of manufactured housing, it would appear that such units are and could continue to be a major contributor to the housing stock in the United States. A better understanding of the perceptions of manufactured housing among residents and community members alike can help guide local, state, and federal policy.

## **Methodology**

Two surveys were conducted in eight non-metropolitan statistical area (MSA) counties in Virginia: the Manufactured Home Resident Survey and the Community Resident Survey. The counties selected for study represented the non-MSA counties with the highest and lowest percentage of manufactured homes in 1990 in each of four regions of Virginia. The lowest percentage was 1.5 percent and the highest was 35 percent. A list of people residing in manufactured housing is not readily available in most counties. After discussions with local housing officials, it

was determined that all manufactured housing required a building permit when sited or remodeled. To narrow the scope of the sample, people who had obtained a building permit for a manufactured home between 1989 and 1992 were identified for the manufactured home resident sample. A proportionate random sample of 1,000 residents was selected from the total number of manufactured home building permits issued in those counties during that time. Of the 1,000 questionnaires mailed to the sample, 278 were returned as undeliverable. Data were collected using the Dillman (1978) method, which included an initial mailing, a follow-up postcard, and a second complete mailing. This procedure resulted in 228 responses from 722 deliverable questionnaires (a 32 percent return rate). Some of the permits may have been sent to unit owners rather than renter residents. The questionnaire was designed to obtain information about manufactured home residents, their housing characteristics, their satisfaction with their housing, and their perceptions about single- and double-section manufactured homes and the people who live in them. Of the respondents, 140 indicated that they lived in single-section homes, and 80 reported living in double-section homes. (The rest did not indicate their type of home.) Chi-square analysis and *t*-tests were used to compare differences in respondents who lived in single- and double-section units.

In the second survey, a total of 2,000 rural community resident households were surveyed through mail questionnaires. A proportionate random sample was purchased from a professional sampling firm that based its listings on the white pages of the phone books for each of the eight counties in the survey. Two questionnaires were developed, one about single-section and one about double-section manufactured homes. Each questionnaire included a line drawing illustrating the specified type of manufactured home. The 552 usable questionnaires from respondents who did not reside in manufactured housing represented an overall response rate of 48.5 percent of deliverable questionnaires. A large number of undeliverable questionnaires lacking the correct or full address greatly affected the response rate. The total sample for this survey was composed of two groups of community residents: the single-section subsample, including 274 respondents to the questionnaire about single-section manufactured homes, and the double-section subsample of 278 respondents to the questionnaire about double-section units. Chi-square and *t*-tests were used to compare these two groups.

Finally, the two samples were compared. The manufactured home residents' impressions of single-section homes were compared with the perceptions of the community resident sample asked about single-section homes, and the manufactured home residents' perceptions of double-section homes were compared with the perceptions of the community resident sample asked about this type of house. Chi-square analysis was used to determine significant differences in the comparisons. Significance was set at 0.05.

## Findings

### *Characteristics of manufactured home residents*

A slightly higher proportion of the manufactured home resident sample was male (54 percent), and a very high proportion was white (90 percent). The highest proportion of the sample was in the 35–50 age bracket (42 percent). The small, two-parent family was the dominant household type for the total sample (41 percent) and for the households in double-section units (51 percent).

The income of the total sample was fairly evenly divided among the income categories above \$5,000. Double-section residents were more likely to be in higher income categories than single-section respondents were: 27 percent of the double-section respondents were in the \$45,000 or more category, while only 11 percent of the single-section respondents were in this category. Most respondents in the total sample worked full-time (59 percent), but a large number were retired (19 percent), and some reported being homemakers (10 percent). Most of the respondents in the total sample had graduated from high school (40 percent) or had attended some college (22 percent). Single-section residents were more likely to have high school degrees (44 percent) than college degrees (14 percent), while double-section respondents were fairly evenly divided between these two categories (34 percent and 36 percent, respectively).

Differences did exist between the single- and double-section residents in terms of several housing characteristics. A majority of double-section respondents reported having their homes on a permanent foundation (68 percent), while most single-section respondents reported that their homes were skirted on blocks (83 percent).

Almost all double-section respondents owned their home and the land it was on (93 percent). A large proportion of single-section respondents reported such ownership too (73 percent), but a significant portion also reported owning their home while renting the land it was on (23 percent). A majority of respondents from both groups reported living on open land (80 percent), but a higher proportion of double-section respondents lived in subdivisions (13 percent), and a higher proportion of single-section residents reported living in parks (15 percent).

A majority of respondents had lived in a mobile/manufactured home before (59 percent). Among the single-section respondents, 50 percent had previously lived in mobile/manufactured housing, but among the double-section respondents, over three-fourths had lived in a manufactured home before. This was a significant difference and indicates that double-section units might be a form of trade-up housing choice for many of these respondents. A consistent finding among both single- and double-section respondents was that over half (53 percent) indicated

that they would choose another mobile/manufactured home if they left their current one.

Most of the respondents' homes were located in residential neighborhoods (59 percent), although a large portion were also placed on farmland (31 percent). Double-section respondents reported living on farmland more frequently than single-section respondents did (41 percent versus 25 percent), while single-section respondents reported living in residential areas (62 percent) and on open land (12 percent) more frequently than double-section respondents did (53 percent and 1.3 percent, respectively). The placement of double-section units on farmland suggests that this housing is being placed on farms in the areas, whereas single-section units may be placed in more concentrated areas like parks or subdivisions.

### *Characteristics of community residents*

Overall, the community resident sample was male (61 percent) and white (92 percent). Respondents ranged in age from 21 to 95. Most were between 36 and 50 (36 percent), followed by those 66 or older (27 percent). Just over 37 percent of the respondents' households were composed of couples with no children. In addition, 30 percent of all respondents were from small, two-parent households (4 to 5 members).

A total of 508 respondents (92 percent) reported total annual household income. Of these, 38 percent reported having incomes at or above \$45,000; 31 percent had incomes between \$25,000 and \$44,999; and 31 percent had incomes below \$25,000. Over half of all community residents (56 percent) indicated that they were fully employed, and another 30 percent were retired. The highest percentage of respondents (23 percent) were high school or GED graduates, and 19 percent had some college or vocational education beyond high school but had not completed a degree.

The housing-type characteristics of the sample were homogeneous. Some 95 percent of all respondents lived in a single-family house, while only 5 percent lived in apartments, town houses, duplexes, or other dwellings. A large majority of the respondents (88 percent) owned their homes; only 8.6 percent were renters (the rest specified "other"). About 45 percent of the homeowners believed their homes were valued between \$50,001 and \$100,000, while 32 percent of the sample indicated house values above \$100,000.

Several questions on the community resident survey sought to determine knowledge about or experience with manufactured housing, and 47 percent of the respondents indicated that they lived very close to manufactured homes. Only 10 percent of the double-section sample re-

spondents had previously lived in a double-section manufactured home. By contrast, more single-section sample respondents had lived in a single-section manufactured home (37 percent). Finally, 29 percent of the respondents indicated that they had “average” knowledge about either single- or double-section units. However, double-section survey respondents believed they were less knowledgeable about their corresponding units than single-section survey respondents did.

About 88 percent of the respondents knew someone who lived in a single- or double-section manufactured home. A total of 93 percent of the single-section sample had visited a single-section home while 85 percent of the double-section sample respondents had visited a double-section home. There were important differences between the subsamples because, on average, single-section survey respondents had visited the corresponding manufactured homes more recently (mean = 9 years, standard deviation = 25.07) than the double-section survey respondents had (mean = 15 years, standard deviation = 33.80). Also, in the total sample, many of those who had visited a single- or double-section home (48 percent) had done so less than a year before this study.

The condition of the single- and double-section units visited by the sample respondents mostly ranged from “ok” (22 percent) to “good” (31 percent) to “very good” (30 percent). However, most of the single-section subsample (63 percent) rated the single-section units visited as “ok” (31 percent) to “good” (32 percent), while the double-section subsample (70 percent) believed that the double-section units visited were in “good” (31 percent) to “very good” (39 percent) condition. More single-section survey respondents (10 percent) believed that those single-section units visited were in “very bad” to “bad” condition than the double-section survey respondents (3 percent) did when gauging the condition of the double-section units they had visited.

## Comparison of the studies

Summary tables were prepared to illustrate the similarities and differences between several demographic characteristics of the single- and double-section residents and the perceptions that manufactured housing residents and community residents have about these characteristics (tables 1 and 2). Table 1 seems to indicate that neither sample has very accurate perceptions about the single-section homes in their locality or the people who reside in them. When compared with the two samples’ perceptions, the single-section residents actually had more education, retirees, couple households, and home and land ownership. Over half had incomes above \$20,000, while the majority of respondents perceived that single-section residents were low-income. Over 90 percent were white, higher than perceived by the two samples. More single-section units were blocked and skirted, and many more homes were

**Table 1. Comparison of Community and Manufactured Housing Resident Perceptions with Actual Residents: Single-Section Sample**

Characteristic	Actual Characteristics Single-Section Sample (%)	Perceived Characteristics	
		Manufactured Housing Resident Sample (%)	Community Resident Sample (%)
Education			
High school/GED	44	51	52
Some college/vocational	31	15	8
Income	43 < \$20,000	63 low-income	74 low-income
Employment			
Full-time	56	80	79
Retired	21	3	3
Race (white)	91	76	82
Household type			
Small, two-parent families	35	55	58
Couples	21	9	9
Tenure			
Own home and land	73	42	25
Own home/rent land	23	42	48
Foundation			
Blocked and skirted	83	64	67
Permanent	14	13	14
Neighborhood			
Park	15	56	67
Subdivision	9	2	5
Open farm	76	10	10

located on open land and not in parks than were perceived so by the two samples.

The comparisons of the double-section sample resident characteristics and the two sample perceptions of these characteristics in table 2 indicate similar patterns. The residents had higher percentages of the following characteristics than were perceived by the community and manufactured housing residents: education, retirees, couples, and location on open land. In a few cases, the manufactured home residents seemed to have more accurate perceptions of the double-section homes than community residents did in terms of income, tenure, and foundation. The following section compares the perceptions of the two groups in more detail.

### *Comparisons of perceptions of manufactured housing*

The perceptions of manufactured home residents and community residents were compared using chi-square analysis. They agreed on several

**Table 2. Comparison of Community and Manufactured Housing Resident Perceptions with Actual Residents: Double-Section Sample**

Characteristic	Actual Characteristics Double-Section Sample (%)	Perceived Characteristics	
		Manufactured Housing Resident Sample (%)	Community Resident Sample (%)
Education			
High school/GED	34	51	58
Some college/vocational	55	34	18
Income	27 < \$20,000	16 low-income	74 low-income
Employment			
Full-time	64	87	86
Retired	15	8	2
Race (white)	90	81	76
Household type			
Small, two-parent families	51	66	64
Couples	28	2	9
Tenure			
Own home and land	93	93	74
Own home/rent land	4	4	13
Foundation			
Blocked and skirted	31	31	41
Permanent	68	60	37
Neighborhood			
Park	1	2	22
Subdivision	13	5	8
Open farm	86	18	29

perceptions of single-section manufactured housing: that single-section residents were high school graduates, worked full-time, and were apt to be low-income and white. These perceptions were not completely accurate in describing the actual characteristics of single-section manufactured home residents because they did not reflect the large portion of residents who had some college education or were retired. Both groups of residents also agreed on the perception that most single-section homes were blocked and skirted, and the reality, as reported by the actual single-section residents, bears this out.

Several perceptions were not consistent between the manufactured home and community residents. The former were more likely to perceive single- and double-section residents as middle-class, local, and exhibiting good social behavior. They were also more likely to perceive single-section homes as having a good appearance and, while still noting that single-section homes were likely to be in mobile home parks, they recognized more often than community residents did that single-section homes were likely to be in residential areas.

Manufactured home residents were more likely than community residents to perceive that double-section home residents were college educated or retired. They were also likely to perceive that double-section homes were resident-owned and located on land the residents owned. They perceived that double-section homes were in residential areas and were built on a foundation. These perceptions were generally consistent with the descriptive profile of the double-section residents. Community residents were more likely to perceive that double-section units were older and in mobile home parks and that their appearance and condition were bad, compared with the manufactured home residents' perceptions.

### *Impact of manufactured housing on the neighborhood*

The two samples were asked a series of questions about manufactured housing in general and the impact of placing it in a neighborhood. Community residents were consistently and significantly more negative about the impact than manufactured home residents were (table 3). Community residents disagreed that placing a manufactured home in a neighborhood would increase property values (mean = 3.11), improve neighborhood quality (mean = 3.10), create a better social image (mean = 3.09), increase neighborhood satisfaction (mean = 3.06), make the neighborhood more attractive (mean = 3.00), and develop a stronger neighborhood character (mean = 3.00). Manufactured home residents tended to be more neutral on these and other items in the series. Both samples disagreed that placing manufactured homes in a neighborhood would lower property taxes (resident mean = 2.90 and nonresident mean = 2.82).

## **Conclusions and implications**

Community residents do not view manufactured housing in a very positive light. They think of it as old, having a fairly bad appearance, and housing low-income people who exhibit bad social behavior. People who reside in manufactured housing are more positive, especially about double-section homes. Their perceptions somewhat match the characteristics of the double-section residents in this study. Image and appearance seem to be key factors in acceptance. Community residents' perceptions of the condition and appearance of double-section units were not favorable, and their perceptions of foundation type were not accurate compared with the residences themselves. Because many double-section homes are similar to modular housing in appearance, community residents might not recognize the double-section homes in their communities, especially if the foundation and siting are well designed. It is ironic that homes that could improve the image of manufactured housing might blend into the community so well that any positive influence on

**Table 3. Comparison of the Perception of Manufactured Housing Impacts for Manufactured Home Residents and Community Residents**

Manufactured Housing Impacts	Manufactured Home Residents			Community Residents			t Value
	Mean	Standard Deviation	N	Mean	Standard Deviation	N	
Increase property value	2.72	0.64	220	3.11	0.67	530	$t = -7.37$ $p = 0.0000$
Increase traffic	2.4	0.69	219	2.29	0.68	531	$t = 1.96$ $p = 0.0000$
Increase neighborhood satisfaction	2.53	0.67	218	3.06	0.69	517	$t = -9.50$ $p = 0.0000$
Move out and sell home	2.77	0.78	222	2.46	0.77	524	$t = 5.17$ $p = 0.0000$
Create better social image	2.65	0.63	216	3.09	0.62	523	$t = -8.65$ $p = 0.0000$
Create more noise	2.6	0.77	222	2.3	0.73	527	$t = 5.10$ $p = 0.0000$
Better neighborhood quality	2.67	0.6	212	3.1	0.61	526	$t = -8.69$ $p = 0.0000$
Stronger neighborhood character	2.6	0.57	213	3.0	0.66	519	$t = -7.70$ $p = 0.0000$
Attract desirables	2.57	0.62	212	2.9	0.69	511	$t = -6.17$ $p = 0.0000$
Create safer environment	2.46	0.65	217	2.91	0.67	510	$t = -8.29$ $p = 0.0000$
Lower property tax	2.9	0.67	218	2.82	0.7	511	not significant
More attractive neighborhood	2.54	0.64	215	3.0	0.69	517	$t = -8.42$ $p = 0.0000$
Good social and physical fit	2.24	0.61	220	2.91	0.77	528	$t = -11.46$ $p = 0.0000$
Social homogeneity	1.36	0.48	220	3.01	2.0	552	$t = -12.09$ $p = 0.0000$
Physical homogeneity	2.17	0.69	226	2.26	0.7	536	not significant

Note: Measurement of variables ranged as follows: 1 = Strongly agree, 2 = Agree, 3 = Disagree, 4 = Strongly disagree.

perception is negated because people do not recognize them for what they are.

Both samples viewed the single-section home inaccurately compared with the ones in this study. The image of the “trailer” seems to prevail—old units, in bad condition, and in a park. The accuracy of this image must be questioned when looking at who lives in the manufactured housing in the rural counties studied in Virginia. One of the difficulties of this study was how to obtain a sample of manufactured housing residents. Using local building permit records limited the way the sample was identified and resulted in a sample living in relatively new housing. Most of the homes were less than five years old (58 percent). The age variation between the actual manufactured home residences and the older manufactured homes with which community residents had

experience, added to the discrepancies between the sample description and the perceptions identified by the two samples. However, as long as the impression and acceptance of newer manufactured homes and of the people who live in them are based on the perceptions people have of older units, it will be difficult to get people to accept manufactured housing as a desirable alternative.

Using manufactured housing to provide nonsubsidized housing for low- and moderate-income families depends on local and state governments' willingness to address the issues that seem to impede its acceptance. The federal government has tried to ensure the quality of the units and has provided financing mechanisms. Although these efforts certainly still need improvement and enhancement, most of the problems facing manufactured housing seem to occur at the local level and with community residents who think manufactured housing will impact them negatively.

### *Manufactured home parks*

Manufactured and non-manufactured home residents' views of mobile home parks point to an environment that needs particular attention to improve the image and livability of manufactured housing. Too many parks are poorly managed and appear unkempt, and those who live there are often viewed as "trailer trash." Local communities must set standards for density, appearance, and level of maintenance that will help make these parks more desirable places to live. They should partner with local nonprofits and developers to encourage new subdivisions to develop amenities and qualities that will make them more suitable places to live.

Suchman (1995) reports increased interest by housing developers in using manufactured housing. Professional practice in leasing, marketing, and maintenance could improve the livability of manufactured home parks and subdivisions. The image and perception of these environments among consumers and community residents would then improve.

### *Aging housing stock*

Old manufactured housing units can be eyesores and can fuel the negative impression that the public may have of manufactured housing. Some of the perceptions community residents had about manufactured housing were probably related to the age of the units they were familiar with. The average community resident responding to the single-section survey had visited a unit 9 years ago, while the average resident responding to the double-section survey had visited a unit 15 years ago.

The design and condition of units in the 1970s and 1980s were very different from what they are today.

All houses age, need repairs and upkeep, go out of style, and reflect neighborhood changes. Because manufactured housing is a product of the late 20th century, it is only recently that families and communities have faced the renovation or disposal of old units. Plans to remodel, renovate, or refurbish manufactured housing are not readily available to consumers. Contractors and homeowners probably do not know how rooms might be added or about how wiring, plumbing, and structural components might be changed. If the owner decides to replace an older unit with a new one rather than repair or renovate, how and where will the older unit be disposed of? Communities need to plan what they will do with discarded units and how they might reuse them or recycle their parts.

### *Need to educate consumers*

Educational information and programming need to be available to consumers who may be thinking of buying a manufactured home and also to community leaders and nonprofit housing corporations who are deciding where and how this housing type may be used. General information on housing finance, insurance, energy conservation, and housing selection could encourage young consumers to make beneficial choices. Further information on the long-term value and costs associated with manufactured housing could be provided. Spending more at the outset may reduce some of the life-cycle costs in energy consumption, as well as maintain or enhance the value of the house. Consumers should understand what the equity in their home is and how it can be used to create wealth and long-term security. Understanding the manufactured home would help communities and nonprofits provide better housing choices for lower-income residents. The U.S. Department of Agriculture Cooperative Extension Service has provided some training on this topic (Clark, Ellard, and Mireley 1992; Clark et al. 1991) and could be encouraged to broaden this effort on a national level.

### *Community and industry*

Manufactured housing is one of the most affordable options for low-income households. However, its acceptance in this market stereotypes it as a place where low-income people live. When communities restrict the placement and acceptance of manufactured housing, are they concerned about placing the housing only in certain areas, or are they really concerned about restricting low-income people to certain areas? Design requirements can enhance the acceptance of manufactured housing by making it look more house-like; however, these requirements often in-

crease the cost and raise the income required to live in the unit beyond what the lowest-income households can afford. Communities may have made the mobile home more acceptable, while at the same time eliminating low-income families from the market.

The manufactured home industry therefore faces a challenge: how to make manufactured homes more physically appealing to consumers and the general public, as well as how to keep the price down. Research such as that reported in *Innovations at the Cutting Edge—New Ideas in Manufactured Housing* (PATH 1999) must continue in order to develop a better manufactured home for the new millennium.

### *Authors*

Julia O. Beamish is Associate Professor of Housing in the Department of Near Environments at Virginia Polytechnic Institute and State University. Rosemary C. Goss holds the Residential Property Management Professorship in the Department of Near Environments at Virginia Polytechnic Institute and State University. Jorge H. Atilas is Assistant Professor and Housing Extension Specialist in the Department of Housing and Consumer Economics at the University of Georgia. Youngjoo Kim is Graduate Assistant in the Department of Near Environments at Virginia Polytechnic Institute and State University.

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