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ABSTRACT

Data derived from 1,423 adults who were permanent residents in 9 northwest Wisconsin counties in 1974 were used to test the hypothesis that peripheral metropolitan ring areas (within 30 miles of cities over 50,000) have more pleasing natural environments and more desirable social settings than urban areas and offer better access to jobs and services than rural areas. Dependent measures were drawn from 39 community and environmental items tapping 3 quality of life dimensions -- the natural environment, social relations, and facilities/services. Eight individual (age, education, sex, marital status, household size, residential duration, family income, and organizational membership and two ecological (size and distance from urban center) variables were employed. Results indicated persons living in the ring areas: rated their environment more favorably than urbanites; rated their social setting less favorably than either urbanites or rural people; and rated their social services less positively than rural people. Persons living in small towns and open country areas beyond the 30-mile perimeter rated their environment higher than urbanites and, with a few exceptions, higher than rural dwellers; rated their social setting, with 2 exceptions, higher than urbanites and, with 2 exceptions, higher than ring area dwellers; rated their job opportunities and many other services higher than suburbanites. (JC)

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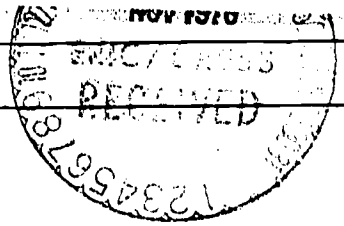

RESIDENTIAL LOCATION, SIZE OF PLACE, AND COMMUNITY SATISFACTION IN NORTHWEST WISCONSIN

by

J. Gary Linn

REPORT NO. 13 OF A SERIES ON

QUALITY OF LIFE AND DEVELOPMENT IN NORTHWESTERN WISCONSIN

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Background and Problem

The growing concentration of people around large cities continues to be a major dimension of population redistribution in the United States. This phenomenon recently was observed in all regions of the United States in metropolitan fringe counties and in counties adjacent to metropolitan areas (Beale and Fuguitt, 1975). Decentralization of urban population was also recently studied in the Upper Midwest around places above, as well as those below, 50,000 (Gustafson, 1975). Studies of residential preference in Wisconsin (Zuiches and Fuguitt, 1972) and the nation (Fuguitt and Zuiches, 1975) suggest that many people moving to peripheral metropolitan ring areas are merely fulfilling a desire to live in a rural, or small town setting, within commuting distance of a large center. Almost one-half of the Wisconsin residents, and over a majority of the nationwide sample, indicated a preference for rural places, or small to medium cities, within 30 miles of cities over 50,000. Flinn and Johnson (1974) hypothesized that a preference for a suburban or rural residence may be rooted in traditional agrarian attitudes which perceive city life as artificial and evil and agricultural life as the natural, and therefore good life for man. The continuing, and in some cases worsening, problems of older urban core areas--deteriorating buildings, high taxes and crime, pollution and crowding--may make residence outside the city the most desirable alternative. It appears correct to assume that many individuals move to outlying localities because they perceive them as offering the best possible mix of rural and urban amenities: a relatively pollution-free environment, safe and peaceful neighborhoods, which are conducive to a good family life, and convenient access to jobs, services, and cultural opportunities.

The purpose of this study is to test the assumption that peripheral metropolitan ring areas are superior residential settings. The general hypothesis is that these localities have more pleasing natural environments and are more desirable social settings than large urban centers, and that they offer better access to jobs and services than more remote places. This general theory has been refined into a number of specific propositions which are listed below together with their rationales:

1. Persons living in small towns and the open country within 30 miles of cities over 50,000, will be more satisfied with their natural environment, and perceive less serious environmental problems in their area, than individuals residing in metropolitan centers.

Environmental degradation including problems of air, water, noise pollution, and crowding are more serious in densely populated and industrialized core metropolitan localities than in largely residential, low density, suburban communities.

2. Persons living in small towns and the open country over 30 miles from centers greater than 50,000, will evaluate their natural environment more positively than individuals living in localities of the same size within 30 miles of metropolitan centers.

The greater the distance from large, densely populated, industrialized cities the lower the incidence of the environmental problems associated with them.

3. Persons living in small towns and the open country within 30 miles of cities over 50,000, will evaluate their primary social relations, and the safety and peacefulness of their area, higher than individuals residing in metropolitan centers.

Primary social groupings including the family and the neighborhood are assumed to break down in the metropolis as a result of the increasing heterogeneity of individuals, multiplicity of social relationships, and transiency of residence (Wirth, 1938). If Wirth's hypothesis is correct, once individuals have moved beyond large, compact settlements, they should be more affectively involved in their community and obtain greater satisfaction

from relationships with their nuclear and extended families, which occur in their local area. Secondly, metropolitan centers with greater differences in social and economic stratification, and lower levels of normative consensus, than smaller suburban or rural communities, have higher levels of crime and disorder.

4. Persons living in small towns and the open country greater than 30 miles from cities over 50,000, will rate their social settings more favorably than individuals living in localities of the same size within 30 miles of metropolitan centers.

As communities are located at a greater distance from larger centers they are less likely to be influenced by the pernicious effects of urbanism. High levels of formality and impersonality in social relations and the disruption of family life which occurs in metropolitan fringe areas will not be experienced to the same degree in more remote communities; and urban crime and disorder that can "spill over" into small communities adjacent to large cities should not be a problem.

5. Persons living in small towns and the open country within 30 miles of cities over 50,000, will rate their job opportunities, and the services available to them in their area, higher than individuals residing in localities of the same size greater than 30 miles from metropolitan centers.

Proximity to a large urban center presumably offers many advantages in regard to jobs and facilities and services over a location in the hinterland. Persons living within the 30 mile perimeter can commute to work, shopping, or recreation located in the center of the metropolis (Beegle and Schoeder, 1955; Kurtz and Smith, 1961). With the decentralization of business and industry around cities, many retail outlets and job opportunities may relocate in suburban or further outlying communities (Tarver, 1957; Hansen, 1973:12-15). Public services such as fire protection, public transit, and bookmobiles, which generally are only available to residents of larger centers may extend themselves to communities well beyond the city limits; and

professionals such as teachers and medical doctors who prefer to live near large cities might consider setting up a practice, or teaching in a suburban community, or in an adjacent nonmetropolitan county.

Framework for Analysis

The dependent measures for this analysis are drawn from 29 community and environmental items tapping three quality of life dimensions of communities--the natural environment, social relations and facilities and services. The operationalization of these variables is given below. Eight individual characteristics and two ecological variables are employed, and their operationalizations are also described below. The person characteristics include demographic variables found in a past analysis to influence community ratings (Rojeck et al., 1975); and the ecological variables represent categories of community size, and location with respect to metropolitan center indicated by the hypotheses and found in Northwest Wisconsin.

Two types of statistical analysis are performed on the indicators. Initially, an analysis of covariance using dummy variable regression is done on each of the dependent measures to assess the relative effects of the covariates (age, education, sex, marital status, household size, residential duration, organizational membership and family income), and the dummied categories of size and distance from metropolitan center.[1] The covariates (as will be shown below) in many cases are found to influence the ratings independently of size and distance.

The evaluations are corrected for the effects of individual biases associated with these demographic variables in the following manner: respondent's scores on the eight person characteristics are individually multiplied by the regression coefficient of the same demographic variable obtained for the entire sample; the corrected individual characteristic

measures are summed with the person's responses on each rating.

Subsamples of respondents living in places pre-selected for hypothesis testing are drawn and means for each group computed on the corrected evaluations. The average scores presumably show the influence of categories of community size and distance with respect to metropolitan centers, while holding constant the influence of individual characteristics. Tests for significant differences between the means are performed using student's T-ratio. A formula suggested by Kirk (1968:73-76) for samples with unequal n's is employed. All computations are done with the aid of statistical routines provided by Statistical Packages for the Social Sciences.

Data and Method

Sample

Data for this study were collected by the Wisconsin Survey Research Laboratory in the fall of 1974. A multi-stage probability sampling technique was used. The selection of respondents within the household was completed using the Kish (1949) selection procedure. A total of 1,423 adults (18 years of age or older) who were permanent residents in nine Northwest Wisconsin counties were interviewed. The nine counties included Bayfield, Clark, Douglas, Dunn, Eau Claire, Polk, Price, Taylor and Washburn. They were selected to represent the 19 counties in the Northwest and West Central agricultural districts of the state. On the west, this area is bounded by Minnesota, with Minneapolis - St. Paul at the southwest corner, and on the north it extends to Lake Superior. As of 1975, Douglas County in the extreme northeast and Eau Claire County in the southeast corner were both classified metropolitan.

After nearly 50 years of declining or stable population, estimates have shown that all but two of the counties in the study area have grown since

1970. This growth has been attributed to a number of factors: the ex-urban sprawl around the twin cities area; increased retirement settlement and recreation; and gains in manufacturing employment (Beale and Fugultt, 1975).

Community and Environment Dependent Variables

Table one shows the wording for the 29 items measuring respondents' evaluations of their locality's natural environment, social relations and services. Questions 10-14 are combined in the scale social integration and

[Table 1 about here]

questions 15-17 are summed to form the index community solidarity. As shown in Table two, the items in each of these indices are correlated at the .32 level, or above. Thus they are presumed to be scalable. The item to total correlations and the Cronbach's alpha coefficients reported in tables three and four indicate that we can place faith in the scales' reliability.

Independent Variables

Age, education, marital status, and household size were measured with direct questions asking the respondent's exact age in years, highest grade of formal schooling completed, (and college degrees received), current marital status, and the total number of persons living in the household. Age was scored in terms of the respondent's exact age, and missing data were assigned the sample mean (48.57). Education was operationalized according to a weighted code which emphasized the attainment of high school, undergraduate, and postgraduate degrees, and missing data were assigned the sample mean (20.12). Marital status responses were collapsed into two categories, married and not married. Household size was scored in terms of the exact number of individuals living in the respondent's home.

Residential duration, organizational member, and family income also were measured with direct questions. Respondents were asked their length

of residence in years,[2] whether they were members of any organizations or clubs, and the total income of their family for the previous year (1973). Residential duration was scored according to a weighted code which assumed that the most important differences in community evaluations by length of residence occurred during the first five years of residence. Scores of one were assigned to residents of two months or less; three to five months, two; six to twelve months, three; two years, four; three to five years, five; six to fifteen years, six; over fifteen years, seven. The variable organizational member was assigned a one if the person belonged to one or more organizations or clubs and a zero, if no memberships were reported. Respondents were asked to choose between 20 income categories, the highest being $35,000 or more. They were given a score corresponding to the selected category. Missing data were assigned the sample mean (10.07).

Community size was determined from 1974 Wisconsin State Department of Administration estimates. Scores of four were assigned to persons living in places 11,000 to 50,000; 4,000 to 10,999, three; name place less than 2,500 to 3,999, two; and rural (open country) residents were given a score of one. Distance from metropolitan center was determined by measuring from the center of each minor civil division to the edge of the nearest metropolitan center via highway distance. Scores of four were assigned to persons living beyond 50 miles from a city of 50,000, or larger; 31 to 50 miles, three; one to 30 miles, two; and respondents living within the metropolitan centers of Superior or Eau Claire received a value of one.

Results

The evaluation of the quality of life in a community is presumed to be influenced by the characteristics of the respondent. Persons of different age, income, and education are expected to have different needs

and criteria for determining how well those needs are satisfied. For example, individuals with a high level of education may place a greater value on schooling and demand more college preparatory courses from the local schools than persons with less education. Past studies using subjective community measures found the characteristics of the respondents to influence their evaluations (Marans and Rodgers, 1972; McGranahan et al., 1975). Tests for interactions between the demographic variables and a measure of community structure (size) found none of substantial importance (Rojeck et al., 1975). Therefore, individual measures are assumed to have a linear influence on the ratings in this study.

Table five shows age and education significantly related to many of the items tapping all three community quality of life dimensions. Residential

[Table five about here]

duration is also a consistently significant predictor of items measuring social relations and services. Other demographic variables (sex, marital status, household size, organizational member and family income) show up less often as significant predictors. To control for the influence of personal biases associated with these individual characteristics on the responses, the ratings are corrected following the method described above.

The first hypothesis proposes that persons living in small towns and the open country within 30 miles of cities over 50,000 will be more satisfied with their natural environment and perceive less serious environmental problems in their area than residents of metropolitan centers. Findings presented in Tables six and seven of differences in the mean evaluations of the environment and environmental problems support this proposition.

[Table six about here]

Residents of small towns (incorporated places up to 3,999) within a 30-mile radius are significantly less concerned with air pollution, noise, people

living too close together, and crowded recreation facilities in their area. They are also significantly more satisfied with their natural surroundings, and they report that stream and lake pollution, and litter are less of a problem, though the differences are not significant.

The evaluations by persons living in rural areas (Table seven) at the same distance from places over 50,000 are all significantly lower with the greatest differences between the ratings of air pollution, people living too close, and crowded recreation facilities. Three problems which would

[Table seven about here]

obviously produce less concern in the low density, pure air, natural setting of the countryside.

The second hypothesis asserts that persons living in small towns and in the open country beyond the 30-mile perimeter will be less concerned with environmental degradation in their area, and more satisfied with their natural surroundings, than persons living in places of equal size within the 30-mile limit. Despite some contrary evidence, the data in Tables eight and nine generally support this proposition. All but two of the differences between the average ratings given in the small towns are in the expected direction, although lake pollution, litter, and people living too close, show the only significant differences.

[Table eight about here]

Two of the environmental problems, noise and crowded recreation facilities, are reported to be somewnat, though not significantly, more serious in the small towns over 30 miles from metropolitan centers. The increments in these measures may reflect increases in tourism and in-migration in the localities.

For comparisons between ratings given in rural areas (Table nine), five of eight items including adequacy of the environment are significantly

different in the expected direction. A sixth measure, people living too

[Table nine about here]

close, is also lower in the open country over 30 miles from metropolitan centers, while littering and crowded recreation facilities may be somewhat more of a problem in these areas. Perhaps for the same reasons cited above for problems of noise and crowding of recreation facilities in small towns at an equal distance from cities over 50,000.

The third hypothesis deals with the importance of population size and location with respect to metropolitan centers for the quality of communities' social settings. It is theorized that individuals residing in small towns and rural areas within 30 miles of places greater than 50,000 will rate their primary social relations, and the safety and peacefulness of their locality, more positively than persons living in metropolitan centers. This proposition is largely unsupported by the evaluations shown in Tables ten and eleven. In small towns (Table ten) located in the peripheral metropolitan ring areas there is a significantly higher level of community solidarity and slightly greater satisfaction with the locality as a place to live. However, respondents in these places rate their social

[Table ten about here]

integration down. This suggests that even though they experience a relatively high level of affective involvement in their community, their relationships with family members (both nuclear and extended), and friends in the locality, are not as satisfying as those enjoyed by residents of the metropolitan centers. Neighborhood safety and relations between police and people are also rated down, and crime prevention and control is significantly below that given in the large cities. All four of these unexpectedly low ratings indicate an increase in social disorder which may be associated with the growth of population and tourism in these communities. During the period 1970-73

villages and townships were the most rapidly growing components of the region's population (Erickson and Huddleston, 1975). Communities within the 30-mile perimeter receive tourists from nearby cities, as well as recreationists from places to the south who travel highways which run through northwestern metropolises.

A similar pattern of relationships shows up for the comparisons of metropolitan centers with rural areas (Table eleven). The same demographic and recreation processes are probably occurring in the open country, as in

[Table eleven about here]

nearby towns. The rise in rural crime and disorder suggested by the relatively lower evaluations of neighborhood safety, police and people relations, and crime prevention and control, also conforms with a growing statewide trend (Lambert, 1976).

Hypothesis number four assumes that the rural-urban continuum with respect to the pernicious consequences of urbanism extends into the hinterland of the Northwest region. It proposes that persons living in small towns and open country areas greater than 30 miles from cities over 50,000, will rate their social settings more favorably than individuals residing in communities of equal size closer to metropolitan centers. The evidence presented in Tables twelve and thirteen generally support this proposition. Respondents in small towns over 30 miles from metropolitan centers report significantly higher levels of social integration and neighborhood safety. Community solidarity, relations between police and people, crime prevention and control,

[Table twelve about here]

and the adequacy of the community as a place to live are also rated higher, although the differences are not significant.

The relationships for people living in the open country (Table thirteen) are not quite as they were predicted. Individuals living in rural areas

beyond the 30-mile limit experience significantly greater community solidarity

[Table thirteen about here]

and social integration, and they rate the safety of their neighborhoods higher. But the prevention and control of crime in their locality is significantly less effective, and police-people relations, and general satisfaction with their community, is slightly below that reported by rural residents living closer to metropolitan centers. The relatively low level of these ratings suggests that the problems of social disorder accompanying the Northwest region's demographic "turnabout" and recreational development, are felt more acutely in the more remote, presumably peaceful, rural areas than in rural localities closer to large urban centers.

Indeed, the concern of persons living in both small towns and the open country in the hinterland with crime and the effectiveness of the local police is evident in the comparisons of police-people relations, and crime prevention and control, in Tables fourteen and fifteen. In both cases, people

[Tables fourteen and fifteen about here]

living in places beyond 30 miles from cities greater than 50,000 give less favorable replies on these two items than persons living in metropolitan centers.

The fifth hypothesis assumes that the availability of job opportunities and services increases with proximity to large urban centers. It states that persons living in small towns and the open country within 30 miles of cities over 50,000, will rate their employment opportunities, and the services available to them in their area, higher than individuals residing in places of the same size more than 30 miles from metropolitan centers. This proposition is largely unsupported by the data shown in Tables sixteen and seventeen. Only a single item for places within 30 miles--retail services (Table seventeen)--is rated significantly better in the predicted direction.

In small towns located beyond the 30-mile limit (Table sixteen), five of the eight ratings were higher than those reported in communities closer to large urban centers. Three of these evaluations--job opportunities, medical

[Table sixteen about here]

services, and schools--were significantly greater. Persons residing in the open country over 30 miles from cities over 50,000 (Table seventeen) evaluated their job opportunities, library and bookmobile, fire prevention, and public transport more favorably, although none of the differences were significant.

[Table seventeen about here]

The relatively better ratings given for employment opportunities, and the majority of services in the hinterland, may reflect current expansion of jobs and services in these remote areas (Alston et al., 1975). Yet, similar gains are being made in other small towns regardless of location, and cities over 20,000 throughout the Northwest region. Perhaps the differences in the ratings are largely indicative of differences in expectations for jobs and services. Individuals in the more distant communities have experienced lower levels of employment and services, and therefore have lower standards for assessing what is available in their area. An upturn in work opportunities or services may produce a larger increment in their community ratings than an equivalent change in another place closer to, or within, a large city. This interpretation is also supported by the comparisons of the evaluations of job opportunities in Tables eighteen and nineteen. Although employment opportunities have expanded in recent years in smaller remote communities, it can be assumed that jobs are still relatively more available in the large cities. Nevertheless, respondents in the remote small towns and open country areas rate their employment opportunities significantly higher.

[Tables eighteen and nineteen about here]

Conclusion and Discussion

When comparisons are made between the different ratings of the natural environment, social setting, and services for communities of varying size and location, little support is found for the hypothesis that small towns, and open country areas, within 30 miles of metropolitan centers are the most desirable residential settings. Persons living in these places did assess the environment in their area more favorably than individuals in cities over 50,000. However, they did not evaluate their local social setting on the whole as high as residents of metropolitan centers, or people living in small towns, or rural places, beyond the 30-mile perimeter. And they did not rate their services in general as positively as people in the hinterland.

The data suggests that relative to the other locations in Northwest Wisconsin considered in this study, small towns and open country areas, beyond the 30-mile perimeter are the superior residential settings. Respondents living in these localities: 1) evaluated their environment on all items higher than persons in metropolitan centers, and with the exception of noise and crowded recreation facilities in small towns, and litter and crowded recreation facilities in rural areas, rated their natural surroundings better than individuals living in places of the same size closer to cities over 50,000; 2) assessed their social setting, except for crime prevention and police-people relations, more favorably than individuals in metropolitan centers, and but for the same indicators of social order and the measure of overall community satisfaction for the open country, were more pleased with the quality of local social relations than persons living within 30 miles of a large city; and 3) judged their job opportunities, and many of their other services, better than individuals living in the

peripheral metropolitan ring areas.

It is clearer now why these places are currently attracting new migrants and are among the fastest growing components of the Northwest region's population. People moving to the small towns and the open country find scenic, relatively unspoiled surroundings, jobs, and many of the services they enjoyed in urban areas. The increasingly more balanced quality of life offered by these localities in nonmetropolitan areas of Northwest Wisconsin has attracted a diverse group of people. A study of recent migrants in a predominantly rural sample of counties (Lambert, 1976) in this region found a greater percentage of young (under 35) and middle aged persons, many of whom are in the work force and have families, than people of retirement age (65 and over).

However, the subjective evaluations must be interpreted with caution because they do not give a complete picture of the quality of life in small towns and rural areas in the hinterland of Northwest Wisconsin. The ratings are a reflection of the actual conditions in an area in relation to the needs and standards of the respondents. A more complete assessment of the quality of life in a community requires that attitudinal questions be supplemented with objective and behavioral measures.

Table 1. Community and Environmental Item Wordings, Means, and Standard Deviations

Item*	$\bar{X}$	S.D.
1. How serious a problem is the pollution of streams in this area?	2.25	.86
2. How serious a problem is the pollution of lakes in this area?	2.41	.91
3. How serious a problem is air pollution in this area?	1.66	.73
4. How serious a problem is noise in this area?	1.49	.68
5. How serious a problem is litter in this area?	1.98	.86
6. How serious a problem is people living too close in this area?	1.51	.79
7. How serious a problem is crowding of recreation facilities in this area?	1.65	.82
8. How serious a problem is reduction of wildlife in this area?	2.19	.91
9. In general, how satisfied or dissatisfied are you with the environment around here?	5.70	.93
10. How satisfied are you with your chance to know people with whom you can really feel comfortable?		
11. How satisfied are you with your relationships with your close adult relatives?		
12. How satisfied are you with the amount of love and affection you receive?		
13. How satisfied are you with the things you do and the times you have with other people?		
14. How satisfied are you with the way other people treat you?		
(Social Integration)[a]	27.99	3.46
15. Usually I feel free to stop by and visit with most people around here.		
16. Most of the time I do not really feel like a member of this community.[c]		
17. I know the people living around here quite well.		
(Community Solidarity)[b]	11.47	2.23
18. How would you rate the safety of your neighborhood at night?	4.08	.96
19. How good do you think the relations between the police and people are around here?	3.85	.93
20. How good is the crime prevention and control around here?	3.57	1.01
21. In general, how satisfied are you with this community as a place to live?	5.86	1.10
22. How would you rate the opportunities for people around here to find a job?	2.58	1.09
23. How would you rate the stores and retail services in this area?	3.73	1.01

Table 1. (Continued)

Item*	X	S.D.
24. How good is the indoor recreation such as movies, dancing and bowling around here?	3.10	1.20
25. How good are the medical services including doctors, hospitals, and emergency treatment around here?	3.86	1.14
26. How do you feel about the quality of the public schools in this school district?	4.01	.84
27. How good is the public library or bookmobile service in this community?	4.04	.91
28. How good is the fire protection around here?	4.27	.88
29. How good are the public transportation facilities?	2.48	1.30

*Items 1-8 were scored with the following response format: very serious, somewhat serious, small problem, and no problem. All items in this group ranged from four to one.
Items 9-14 and 21 were scored with the following semantic differential format: completely satisfied, very satisfied, mostly satisified, satisfied/dissatisfied, dissatisfied, very dissatisfied, and completely dissatisfied. Items in this group varied from seven to one, and missing data were assigned the appropriate sample mean.
Items 15-17 were scored with the following response format: very true, true, undecided, untrue, very untrue. All items in this group ranged from five to one.
Items 18-20 and 22-29 were scored with the following response format: very good, fairly good, good/bad, not very good, and not good at all. All items in this group ranged from five to one.

[a]Items 10-14 are combined in the scale social integration.

[b]Items 15-17 are combined in the scale community solidarity.

[c]The scoring of this item was reversed to allow summation of the respondent's item scores.

Table 2. Zero-order Correlations, Means, and Standard Deviations for Social Integration and Community Solidarity Scales

Scale	1	2	3	4	5	$\bar{x}$	S.D.
Social Integration							
1. Satisfaction with chance to know people	___	.38	.32	.49	.45	5.50	.99
2. Satisfaction with relationships with close adult relatives		___	.43	.42	.48	5.69	.98
3. Satisfaction with amount of love			___	.36	.39	5.86	1.02
4. Satisfaction with things done and times had with others				___	.55	5.38	.89
5. Satisfaction with the way others treat you					___	5.56	.85
Community Solidarity							
1. Feel free to visit people around here	___	.59	.36			3.98	.89
2. Feel like community member		___	.44			3.76	1.01
3. Know people living around here quite well			___			3.73	.88

Table 3. Item to Total Correlations, Cronbach's Alpha Coefficients, Mean, and Standard Deviation for Community Solidarity Scale

Scale	1	2	3
Community Solidarity			
1. Feel free to visit people around here			
2. Feel like community member			
3. Know people living around here quite well			
Item-to-total correlation	.81	.86	.73
Cronbach's Alpha	.72		
Mean	11.47		
Standard Deviation	2.23		

Table 4. Item to Total Correlations, Cronbach's Alpha Coefficient, Mean, and Standard Deviation for Social Integration Scale

Scale	1	2	3	4	5
Social Integration					
1. Satisfaction with chance to know people					
2. Satisfaction with relationships with close adult relatives					
3. Satisfaction with amount of love and affection					
4. Satisfaction with things done and times had with others					
5. Satisfaction with the way others treat you					
Item-to-total correlation	.72	.74	.69	.76	.77
Cronbach's Alpha	.78				
Mean	27.99				
Standard Deviation	3.46				

Table 5. Significance Levels of Slopes of Demographic Variables Controlling for Community Size and Distance from Metropolitan Center

Dependent Variables	Independent Variables							
	Sex	Age	Education	Marital status	Household size	Residential duration	Organization member	Family Income
Stream pollution		.001	.001				.01	
Lake pollution		.001	.001		.001		.001	
Air pollution		.001			.001			
Noise	.01	.001	.001	.001				
Litter		.001	.001	.05				
People living too close	.001	.001	.001	.05	.001		.001	
Crowded recreation facilities		.001	.001		.001			
Wildlife reduction		.001		.01				
Adequacy of the environment	.001	.001	.01					
Community solidarity	.001	.001			.001	.001	.001	.001
Social integration	.001	.001			.001	.001		
Neighborhood safety			.01	.01		.001		.01
Police and people relations		.001	.001			.001		.001
Crime prevention and control		.001				.001		
Adequacy of community as a place to live		.001		.05		.001	.001	
Job opportunity		.001	.001			.05	.001	
Retail services		.001			.01			
Indoor recreation	.001	.001	.01				.01	
Medical services		.001	.001			.001		
Schools		.01	.01					
Library and bookmobile		.001				.001		.05
Fire protection	.001	.001	.001			.001	.01	
Public transport		.001	.01	.01			.01	

Table 6. T-tests of Average Ratings of the Environment and Environmental Problems in the Area.

Environmental Problems and Adequacy of the Environment	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	Metro center	W/30 miles of metro center Small town		
Stream pollution	2.57	2.37	1.39	N.S.
Lake pollution	2.75	2.61	.96	N.S.
Air pollution	2.05	1.68	2.80	<.005
Noise	1.70	1.43	2.34	<.005
Litter	2.15	2.07	.56	N.S.
People living too close	2.10	1.70	2.47	<.01
Crowded recreation facilities	1.92	1.41	5.07	<.0005
Adequacy of the environment[a]	5.38	5.71	2.97	<.005
(N)	(216)	(40)		

[a]Seven point scale. "Satisfied" responses were assigned high scores.

Table 7. T-tests of Average Ratings of the Environment and Environmental Problems in Area.

Environmental Problems and Adequacy of the Environment	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	Metro center	W/30 miles of metro center Rural		
Stream pollution	2.57	2.29	3.34	<.0005
Lake pollution	2.75	2.47	3.14	<.005
Air pollution	2.05	1.66	5.30	<.0005
Noise	1.70	1.47	2.97	<.005
Litter	2.15	1.97	2.04	<.025
People living too close	2.10	1.41	7.96	<.0005
Crowded recreation facilities	1.92	1.53	4.61	<.0005
Adequacy of the environment[a]	5.38	5.66	2.97	<.005
(N)	(216)	(161)		

[a]Seven point scale. "Satisfied" responses were assigned high scores.

Table 8. T-tests of Average Ratings of the Environment and Environmental Problems in the Area.

Environmental Problems and Adequacy of the Environment	Size of place of distance from metropolitan center		T-value	Significance level one-tailed test
	W/30 miles of metro center	Over 30 miles from metro center		
	Small town	Small town		
Stream pollution	2.37	2.16	1.63	N.S.
Lake pollution	2.61	2.21	2.84	<.005
Air pollution	1.68	1.58	.91	N.S.
Noise	1.43	1.55	1.09	N.S.
Litter	2.07	1.85	1.92	<.05
People living too close	1.70	1.43	1.80	<.05
Crowded recreation facilities	1.41	1.53	1.17	N.S.
Adequacy of the environment[a]	5.71	5.74	.24	N.S.
(N)	(40)	(344)		

[a]Seven point scale. "Satisfied" responses were assigned high scores.

Table 9. T-tests of Average Ratings of the Environment and Environmental Problems in the Area.

Environmental Problems and Adequacy of the Environment	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	W/30 miles of metro center	Over 30 miles from metro center		
	Rural	Rural		
Stream pollution	2.29	2.12	1.95	<.05
Lake pollution	2.47	2.34	1.79	<.05
Air pollution	1.66	1.53	2.12	<.025
Noise	1.47	1.35	1.81	<.05
Litter	1.97	2.02	.63	N.S.
People living too close	1.41	1.33	1.20	N.S.
Crowded recreation facilities	1.53	1.64	1.52	N.S.
Adequacy of the environment[a]	5.66	5.81	1.94	<.05
(N)	(161)	(570)		

[a]Seven point scale. "Satisfied" responses were assigned high scores.

Table 10. T-tests of Average Ratings of Community Social Setting

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	Metro center	W/30 miles of metro center Small town		
Community solidarity[a]	10.69	11.41	2.05	<.025
Social integration[b]	27.76	27.39	.64	N.S.
Neighborhood safety	4.02	3.96	.37	N.S.
Relations between police and people	3.93	3.73	1.32	N.S.
Crime prevention and control	3.85	3.43	3.06	<.01
Adequacy of community as a place to live[c]	5.74	5.75	.05	N.S.
(N)	(216)	(40)		

[a] Index combining three items each with 5 point scales

[b] Index combining five items each with 7 point scales

[c] Seven point scale

Table 11. T-tests of Average Ratings of Community Social Setting

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	Metro center	W/30 miles of metro center Rural		
Community solidarity[a]	10.69	11.00	1.38	N.S.
Social integration[b]	27.76	27.18	1.64	N.S.
Neighborhood safety	4.02	3.91	.98	N.S.
Relations between police and people	3.93	3.84	.92	N.S.
Crime prevention and control	3.85	3.58	2.64	<.01
Adequacy of community as a place to live[c]	5.74	5.95	1.99	<.025
(N)	(216)	(161)		

[a] Index combining three items each with 6 point scale

[b] Index combining five items each with 7 point scale

[c] Seven point scale

Table 12. T-tests of Average Ratings of Community Social Setting

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	W/30 miles of metro center	Over 30 miles from metro center		
	Small town	Small town		
Community solidarity[a]	11.41	11.85	1.48	N.S.
Social integration[b]	27.39	28.45	1.93	<.05
Neighborhood safety	3.96	4.20	1.70	<.05
Relations between police and people	3.73	3.89	1.09	N.S.
Crime prevention and control	3.43	3.68	1.58	N.S.
Adequacy of community as a place to live[c]	5.75	5.78	.20	N.S.
(N)	(40)	(344)		

[a] Index combining three items each with 5 point scales

[b] Index combining five items each with 7 point scales

[c] Seven point scale

Table 13. T-tests of Average Ratings of Community Social Setting

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	W/30 miles of metro center	Over 30 miles from metro center		
	Rural	Rural		
Community solidarity[a]	11.00	11.67	3.39	<.0005
Social integration[b]	27.18	27.95	2.57	<.01
Neighborhood safety	3.91	4.03	1.35	N.S.
Relations between police and people	3.84	3.81	.39	N.S.
Crime prevention and control	3.58	3.38	2.09	<.05
Adequacy of community as a place to live[c]	5.95	5.94	.09	N.S.
(N)	(161)	(570)		

[a] Index combining three items each with 5 point scales

[b] Index combining five items each with 7 point scales

[c] Seven point scale

Table 14. T-tests of Average Ratings of Community Social Setting

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	Metro center	Over 30 miles from metro center Small town		
Community solidarity[a]	10.69	11.85	6.60	<.0005
Social integration[b]	27.76	28.45	2.33	<.01
Neighborhood safety	4.02	4.20	2.34	<.01
Relations between police and people	3.93	3.89	.48	N.S.
Crime prevention and control	3.85	3.68	2.11	<.05
Adequacy of community as a place to live[c]	5.74	5.78	.50	N.S.
(N)	(216)	(344)		

[a] Index conbining three items each with 5 point scales

[b] Index combining five items each with 7 point scales

[c] Seven point scale

Table 15. T-tests of Average Ratings of Community Social Setting

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	Metro center	Over 30 miles from metro center Rural		
Community solidarity[a]	10.69	11.67	5.86	<.0005
Social integration	27.76	27.95	.68	N.S.
Neighborhood safety	4.02	4.03	.19	N.S.
Relations between police and people	3.93	3.81	1.63	N.S.
Crime prevention and control	3.85	3.38	5.75	<.001
Adequacy of community as a place to live[c]	5.74	5.94	2.41	<.01
(N)	(216)	(570)		

[a] Index combining three items each with 5 point scales

[b] Index combining five items each with 7 point scales

[c] Seven point scale

Table 16. T-tests of Average Ratings of Local Services

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	W/30 miles of metro center	Over 30 miles from metro center		
	Small town	Small town		
Job opportunities	2.31	2.76	2.50	<.02
Retail services	3.69	3.61	.47	N.S.
Indoor recreation	2.97	2.83	.65	N.S.
Medical services	3.37	4.02	3.54	<.001
Schools	3.77	4.06	2.20	<.05
Library and bookmobile	4.06	4.04	.19	N.S.
Fire prevention	4.21	4.43	1.72	N.S.
Public transport	2.25	2.41	.77	N.S.
(N)	(40)	(344)		

Table 17. T-tests of Average Ratings of Local Services

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	W/30 miles of metro center	Over 30 miles from metro center		
	Rural	Rural		
Job opportunities	2.51	2.58	.66	N.S.
Retail services	3.85	3.66	2.32	<.025
Indoor recreation	3.21	3.05	1.53	N.S.
Medical services	3.92	3.79	1.24	N.S.
Schools	3.99	3.97	.30	N.S.
Library and bookmobile	3.87	3.91	.43	N.S.
Fire protection	4.01	4.06	.62	N.S.
Public transport	2.33	2.42	.90	N.S.
(N)	(161)	(570)		

Table 18. T-tests of Average Ratings of Local Services

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	Metro center	Over 30 miles from metro center Small town		
Job opportunities	2.39	2.76	4.03	<.001
Retail services	3.98	3.61	4.48	<.0005
Indoor recreation	3.56	2.83	7.41	<.0005
Medical services	3.86	4.02	1.68	N.S.
Schools	4.05	4.06	.15	N.S.
Library and bookmobile	4.44	4.04	6.24	<.0005
Fire protection	4.65	4.43	4.05	<.0005
Public transport	3.21	2.41	7.47	<.0005
(N)	(216)	(344)		

Table 19. T-tests of Average Ratings of Local Services

Community rating	Size of place and distance from metropolitan center		T-value	Significance level one-tailed test
	Metro center	Over 30 miles from metro center Rural		
Job opportunities	2.39	2.58	2.25	<.05
Retail services	3.98	3.66	4.19	<.0005
Indoor recreation	3.56	3.05	5.61	<.0005
Medical services	3.86	3.79	.76	N.S.
Schools	4.05	3.97	1.27	N.S.
Library and bookmobile	4.44	3.91	9.54	<.0005
Fire protection	4.65	4.06	10.54	<.0005
Public transport	3.21	2.42	7.79	<.0005
(N)	(216)	(570)		

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FOOTNOTES

[1]Five categoric variables are used here: residence in a metropolitan center; in a small city (4,000 to 10,999); in a small town (incorporated place up to 3,999); in a place within 30 miles of a metropolitan center; in a place within 50 miles of a metropolitan center.

[2]Except for those with less than one year who reported in months.