(31)

ATTACHMENT 2

Higher-Density Development

MYTH AND FACT

NMHC National Multi Housing Council

SIERRA CLUB FOUNDED 1892

AIA

ULI Urban Land Institute

MYTH

Higher-density development is environmentally more destructive than lower-density development.

FACT

Low-density development increases air and water pollution and destroys natural areas by paving and urbanizing greater swaths of land.

Low-density sprawl takes an enormous toll on our air, water, and land. The United States is now losing a staggering 2 million acres of land a year to haphazard, sprawling development.[39] More than 50 percent of Americans live in places where the air is unhealthy to breathe,[40] and childhood asthma and other respiratory diseases are on the rise.[41] Almost half the damage to our streams, lakes, and rivers is the result of polluted runoff from paved surfaces.[42]

It is inefficient land use, not economic growth, that accounts for the rapid loss of open space and farms. Since 1994, housing lots larger than ten acres have accounted for 55 percent of the land developed.[43] This loss of land often causes unexpected economic challenges for rural communities, where farmland, forests, ranchland, and open space tend to be the economic drivers that attract businesses, residents, and tourists. Low-density sprawl compromises the resources that are the core of the community's economy and character. The majority of American homeowners think it is important to stop these trends. In fact, 76 percent of local ballot initiatives related to land conservation passed in November 2004, making $2.4 billion in funding available for protection of parks and open space.[44] But purchasing land is only part of the solution and not always an option for financially strapped governments.

Higher-density development offers the best solution to managing growth and protecting clean air and clean water. Placing new development into already urbanized areas that are equipped with all the basic infrastructure like utility lines, police and fire protection, schools, and shops eliminates the financial and environmental costs of stretching those services farther and farther out from the core community. Compact urban design reduces driving and smog and preserves the natural areas that are assets of the community: watersheds, wetlands, working farms, open space, and wildlife corridors. It further minimizes impervious surface area, which causes erosion and polluted stormwater runoff. Two studies completed for the state of New Jersey confirm that compact development can achieve a 30 percent reduction in runoff and an 83 percent reduction in water consumption compared with conventional suburban development.[45]

Many communities employ techniques such as infill and brownfield development to transform unused, abandoned lots into vibrant, revenue-generating components of the community. Some create direct incentives for higher-density development. The city of Austin, Texas, for example, created a program that rewards developers for locating projects in the city's existing neighborhoods and downtown. Others award points for a variety of attributes, such as transit access, the redevelopment of empty lots, and an increase in pedestrian facilities. By employing standards for factors like open space, dense development, and impact on water quality, communities can facilitate good urban design that preserves natural resources.

Although a well-designed higher-density community offers residents a higher-quality environment, poorly planned sprawl does the opposite. Because low-density sprawl gobbles up so much land through large-lot zoning, it ends up destroying the very thing most people moved there for in the first place—the natural areas and farmland. It forces people to drive longer distances, increasing regional air quality problems. The average American man spends 81 minutes behind the wheel every day, while women average 63 minutes. And surveys show that the time spent driving has been consistently increasing every year.[46] The national road network, currently at 4 million miles according to the U.S. Department of Transportation, is still growing at an alarming rate, mainly for the purpose of connecting new low-density suburbs back to core communities. Along with the water and air pollution, construction of these highways perpetuates the cycle of sprawl, fragments wildlife habitats, and dries up a community's financial coffers.

Increasing density not only improves air and water quality and protects open space but also redirects investments to our existing towns and cities. It can revitalize existing communities and create more walkable neighborhoods with access to public transit and hiking and biking trails. Pedestrian-friendly higher-density developments offer general health benefits as well. Mixed land uses give people the option to walk and bike to work, shops, restaurants, and entertainment. The convenience of compact communities may help fight diseases related to obesity.[47] Higher-density communities are vital to preserving a healthy environment and fostering healthy lifestyles.

(34)

Record: 3
39490260194436320010101

Title: **The Effects of Sprawl on Neighborhood Social Ties.**
Subject(s): INTERPERSONAL relations -- United States; NEIGHBORHOOD -- United States
Source: Journal of the American Planning Association, Winter2001, Vol. 67 Issue 1, p69, 9p, 2 charts
Author(s): Freeman, Lance
Abstract: The notion that sprawl, in the Form of low-density, auto-dependent neighborhoods, is inimical to neighborhood social bonds is a recurrent theme in the planning literature. Although this seems like common sense, relatively little empirical evidence exists to support this notion. This article tests this thesis using data From a cross-sectional survey of adults in Atlanta, Boston, and Los Angeles and From the 1990 decennial census. Although residential density was Found to be unrelated to the Formation of neighborhood social ties, it was significantly and substantially related to the degree to which residents of a neighborhood relied on their automobiles. [ABSTRACT FROM AUTHOR]
AN: 3949026
ISSN: 0194-4363
Full Text Word Count: 5520
Database: Academic Search Elite

THE EFFECTS OF SPRAWL ON NEIGHBORHOOD SOCIAL TIES

An Explanatory Analysis

The notion that sprawl, in the Form of low-density, auto-dependent neighborhoods, is inimical to neighborhood social bonds is a recurrent theme in the planning literature. Although this seems like common sense, relatively little empirical evidence exists to support this notion. This article tests this thesis using data from a cross-sectional survey of adults in Atlanta, Boston, and Los Angeles and From the 1990 decennial census. Although residential density was found to be unrelated to the Formation of neighborhood social ties, it was significantly and substantially related to the degree to which residents of a neighborhood relied on their automobiles.

Sprawl has come under increasing attack in recent years for weakening neighborhood social ties. Characterized by low-density development, a separation of land uses, and infrastructure that favors the automobile, the sprawling neighborhoods of today are thought by many to spawn social isolation among their inhabitants. Although there is no shortage of polemics against sprawl, relatively little research has been done examining the effect it has on neighborhood social ties. This study seeks to fill this void by exploring how density and dependence on the automobile relate to neighborhood social ties.

The perception that sprawling low-density urban form undermines neighborhood social ties can have a significant impact on how we plan the communities of tomorrow. To the extent that sprawl is thought to have a deleterious impact on our social fabric, planners may wish to limit sprawl, because they believe that the result will be more vibrant communities. This research was motivated by a desire to test whether this criticism of low-density sprawl is justified.

Background

A number of writers have asserted that sprawl has a negative impact on neighborhood social ties. In their comprehensive review of the literature on the costs of sprawl: Burchell et al. (1998) describe one of the major criticisms of sprawl as follows, "Low density development weakens households' connections to both their immediate neighbors and to the larger metropolitan community, and encourages unsociable values.
Sprawl weakens the linkages of ... nearby neighbors" (p. 86).
In another review of the alleged impacts of sprawl, Ewing (1997)
states that "strong communities of place, where neighbors interact,
have a sense of belonging, and have a feeling of responsibility for

one another, are harder to find. Communities of place are a casualty of sprawl [emphasis mine]" (p. 117). In addition, many of the writings of New Urbanists fault sprawl for undermining social ties (Bressi, 1994; Calthorpe, 1993).

The theoretical underpinning of these criticisms stems from arguments made by New Urbanists, New Town advocates, classical urban sociologists, and environmental behaviorists on the relationships of density, dependence on the automobile, and neighborhood social ties, which are outlined below.

Jacobs (1961) was one of the progenitors of the school of thought that linked mixed land uses and pedestrian-friendly streets to an enhanced sense of community in a neighborhood. Like current critics of sprawl, she abhorred urban landscapes with strictly separated land uses that promote automobile hegemony. Jacobs targeted urban renewal, but her critique that limiting mixed land uses results in decreased pedestrian traffic and consequently "less lively" and socially active streets is applicable to sprawl as well.

New Urbanism critiques off sprawl share many of Jacobs' arguments in favor of mixed land uses and pedestrian traffic as crucial ingredients for creating a sense of community or fostering social ties in a place (Duany et al., 2000). Unlike Jacobs, whose focus on New York made high densities a given, current critiques of sprawl also argue for higher densities to allow for pedestrian uses and public transit. ***Higher densities are important because they facilitate walking and public transportation, and when combined with mixed land uses, can place neighborhood amenities within walking distance of residents. These neighborhood amenities are not only convenient, but are places where neighbors can gather and form social bonds. (Emphasis Added)***

In contrast, sprawl reduces social capital primarily because it reduces opportunities for spontaneous social interaction. By eliminating the feasibility of other modes of transit, sprawl forces residents to rely solely on the automobile. Compared to walking or taking the bus or the subway, there is obviously much less chance for spontaneous interaction with neighbors when driving. Another characteristic associated with sprawl that can reduce the potential for spontaneous interaction is the privatization of open space. The low densities associated with the typical sprawling development provide ample room for gardens, patios, and lawns. Thus, the need to make use of public parks or other public open space is reduced. Although using the open space at one's doorstep is certainly convenient, it reduces the potential for making friends and contacts that would come from strolling or having a picnic in the park. Echoing this view, Jacobs and Appleyard (1987) posit that the availability of space for pedestrians and a minimum level of density (which they imply is higher than the typical suburban development) are necessary to support the use of public open space and promote civic life.

It is ironic that the low densities associated with sprawl should come under attack as a threat to neighborhood social ties, because it was the higher densities associated with urbanization that led to one of the earliest antecedents of modern city planning--the New Town movement. Inspired by the thinking of British social reformer Ebenezer Howard, this movement sought to shift much of the urban population to "garden cities" that would have substantially lower densities and provide more open space. Among the anticipated outcomes of living in these New Towns was an increased sense of community. This would be created by "providing a setting for neighborly friendship and co-operative participation" (Stein, 1957, p. 218).

Classical urban sociologists also held the high density of cities partially responsible for the demise of gemeinschaft and the triumph of gesellschaft as the organizing principle for modern society. According to this perspective, high density, along with diversity and the anonymity afforded by urban life, increased stress, severed traditional bonds and led to a decline in community or social ties (Park, 1969; Simmel, 1969; Wirth, 1938). By bringing too many individuals in close contact with one another, high densities actually served to increase loneliness as individuals became reserved toward one another as a means of dealing with the resultant sensory overload (Simmel, 1969; Wirth, 1938).

In more recent times, environmental behaviorists have linked higher densities to the notion of crowding and, consequently, weaker social ties. It is argued that the degree to which individuals feel crowded is dependent upon perceived density, the context of the density, and prior experiences. Crowding may lead individuals to feel as though they have less control over their interactions with others, and to cope by psychological and physical withdrawal (Churchman, 1999). This argument suggests that rather than dealing with too many neighbors,

individuals who perceive crowding will retreat to the sanctuary of their homes or display a reserved personality in public, thus reducing the probability of social ties being formed in the surrounding neighborhood. Thus, to the extent that higher densities lead to crowding, they may also lead to weaker social ties.

The arguments of New Town advocates, classical urban sociologists, and environmental behaviorists, then, suggest that very high densities can also have a dampening effect on neighborhood social ties. This does not necessarily contradict the thinking described earlier that linked low densities to weakened social ties. What it does suggest, however, is that whereas very low densities may undermine neighborhood social ties, as we move up the density scale, at some point higher densities start to have the same effect. The point at which increasing density switches from having a positive to a negative effect on neighborhood social ties is not suggested by the literature. Unlike the New Urbanist perspective, however, these schools of thought have been relatively silent on how the automobile culture might affect neighborhood social ties.

Evidence of the Effects of Sprawl on Social Ties

Given the strength of the assertions alleging ill effects from sprawl on neighborhood social ties, it is somewhat surprising that the evidence on this matter is relatively thin. Moreover, the existing evidence is not conclusive. A number of studies do report findings that suggest sprawl or characteristics associated with sprawl such as low densities, segregated land uses, and automobile hegemony, undermine social ties. For example, both Glynn (1981) and Nasar and Julian (1995) found "sense of community" to be higher in neighborhoods that facilitated face-to-face interaction or where a car was not necessary for transit, characteristics antiethical to sprawl.

Conversely, a number of studies have found that higher-density, more urban environments weaken social ties. These include Wilson and Baldassare (1996), who found that density diminished overall sense of community, and McCarthy and Saegert (1978), whose study found that compared to residents of high-rise public housing, residents of low-rise public housing had greater difficulty establishing mutually supportive neighbor relations beyond their own floors and were less socially active with people outside the housing development.

To muddy the waters further, several studies suggest no relationship between characteristics of urban form associated with sprawl and neighborhood social ties. For example, Churchman and Ginsburg (1984) also examined the relationship between building height and neighborly relations, but in contrast to McCarthy and Saegert, they found that the number of neighbors known by name, the number of mutual help relationships, and the number of neighbors visited regularly by respondents did not vary with the building height of the respondent's residence. Likewise, Michelson (1977) did not find variations in contacts with friends or where friends were made between those living downtown and those living in suburbia, once housing type and family structure were held constant. In a similar fashion, Nasar (1997) found no difference in sense of community between a Neotraditional-type community and a conventional suburb.

When socioeconomic and demographic characteristics were held constant, Fischer (1982) found individuals residing in semi-rural areas to have the most local ties, followed by those in small towns and the central city, with suburbanites having the fewest local ties of all. But Fischer suggests that it was not differences in urban form that caused these variances; rather it was the individuals' proximity to other concentrations of people.

The evidence reviewed here supports Churchman's (1999) contention that there is no consensus on how density might affect neighborhood social ties. The same can be said for other characteristics of sprawl such as dependence on the automobile and mixed land uses. Moreover, many of the studies, such as Nasar and Julian's (1995), Glynn's (1981), and McCarthy and Saegert's (1978), failed to employ multivariate controls which--given the thorny methodological issues related to selection and correlation-makes it difficult to rule out the possibility of spurious relationships in the findings described above. Other studies that included multivariate controls, such as Wilson and Baldassare's (1996), did not control for neighborhood socioeconomic status. Moreover, it is not only density that critics of sprawl see as being responsible for undermining neighborhood social ties. Also important is the automobile culture that is thought to undermine neighborhood social interaction as people become isolated in their cars instead of out and about amongst their neighbors. Excepting Glynn's study, which did not employ multivariate statistical controls, the literature does not directly address how reliance on the automobile affects neighborhood social ties.

In sum, a review of the empirical evidence suggests that an analysis that employs multivariate statistical controls and includes measures of reliance on the automobile as a means of transportation will add to our understanding of the relationship between sprawl and neighborhood social ties.

Hypotheses

The above discussion illustrates a clear theoretical link between sprawl and neighborhood social ties. Because sprawl limits opportunities for spontaneous social interaction with neighbors, the social bonds between them should be weakened. In contrast, residents are afforded more opportunities for social interaction in pedestrian-friendly and transit-oriented neighborhoods. Moreover, with privatized open space and transportation, neighbors have fewer issues in common and fewer things to organize around. This too should serve to weaken neighborhood social ties. Yet very high densities might also serve to dampen neighborhood social ties as people physically and psychologically withdraw as a means of coping with the social overload they encounter. This implies that the relationship of density to neighborhood social ties may not be linear.

Data

Data for this study were drawn from the Multi City Survey of Urban Inequality (MCSUI) Atlanta, Los Angeles, and Boston samples and corresponding data from Summary Tape File 3A of the 1990 census. The MCSUI is a survey of households in Atlanta, Boston, Detroit, and Los Angeles that was designed to gather data that would further our understanding of inequality in urban areas (Johnson et al., 1994). The survey was conducted in 1993 and 1994. This study focuses on Atlanta, Boston, and Los Angeles because the Detroit sample did not contain any social ties measures for respondents. The great strength of the MCSUI for the purposes of this research is that it contains information on the social networks of individuals, which can serve as proxies for social ties, and the census block group of each respondent. Thus, the MCSUI allows for the examination of how a neighborhood's ecological characteristics affect the levels of social ties found there.

Measures

Dependent variable

The measure of neighborhood social ties is based on responses to the query, "From time to time, most people discuss important matters with other people. Looking back over the last six months, who are the people, other than people living in your household, with whom you discussed matters important to you?" The MCSUI interviewers recorded information for the first three persons mentioned. For each person named as a confidant, respondents were then asked if that person lived in the same neighborhood. This data allows two measures of neighborhood social ties to be constructed: one measuring whether or not an individual has any neighborhood social ties and another indicating the number of such ties, up to and including three.

Independent Variables

Among the defining characteristics of sprawl described by Burchell et al. (1998), the ones most likely to affect the formation of neighborhood social ties are: "low relative density," "almost total reliance upon the automobile as a means of accessing the individual land uses," and "land uses ... spatially segregated from one another" (pp. 6-7). Unfortunately, the MCSUI and the census data contain no information that could be used to proxy for the spatial segregation of land uses. Therefore, the measures of sprawl focused on here are density and automobile dependence. The number of persons per square kilometer in the 1990 census block group where the respondent resided was used to measure density. To capture the possible nonlinear relationship between neighborhood social ties and density that was described above, a squared density term was included in the analysis.

Dependence on the automobile was proxied by the proportion of individuals in the neighborhood who drive to work alone. This is admittedly a rough indicator of automobile dependence in a neighborhood, since not all trips are commutes to and from work. But a neighborhood where many residents commute by other means than a car is likely to be a neighborhood where residents can walk for at least some errands. And, as stated earlier, the very act of commuting via mass transit may provide opportunities for social interaction. Thus, the extent to which individuals in a given neighborhood make use of other modes of transit besides automobiles probably gives a good idea of just how dependent the community as a whole is on automobiles.

Statistical Controls

To limit the likelihood of drawing spurious conclusions, the analysis also included a number of other factors that might be related to both an individual's neighborhood social ties and the density and degree of automobile dependence in a neighborhood. Prior research suggests that several factors affect the formation of neighborhood social ties: an individual's socioeconomic status (Bourdieu, 1986; Stack, 1974; Tigges et al., 1998), demographic characteristics (Campbell & Lee, 1992; Cumming & Henry, 1961; Lee et al., 1991; Oliver, 1988; Riger & Lavrakas, 1981; Riley 1987; Patterson, 1999; Tigges et al., 1998; Warren, 1975), the length and type of their present tenure (Davidson & Cotter, 1986; Lee et al., 1991), and household/family structure (Campbell & Lee, 1992; Lee et al., 1991). In addition, several scholars have shown that the level of poverty in a neighborhood is related to the level of social ties found there, with poorer neighborhoods seen to be relatively poor in social resources (Anderson, 1999; Wilson, 1987, 1996).

To capture the above mentioned effects on the formation of neighborhood social ties, the following were included as control variables: the 1990 poverty rate of the census block group of the individual, and the individual's age, gender, race/ethnicity, educational attainment, household income, length of time at present residence, type of tenure, and family structure. In addition to the statistical controls listed above, the city of residence was also included. Table 1 shows the frequency distributions of the dependent variables and the means and standard deviations of the independent and control variables.

Method

A binomial logistic regression model was estimated to assess the impact of residential density and dependence on the automobile on the likelihood a respondent has a neighborhood social tie, while controlling for the socioeconomic and demographic factors described above. To capture the possible nonlinear relationship between density and neighborhood social ties, a squared density term was also included in the model. The odds ratio for each independent variable tells us how much the likelihood of having a neighborhood social tie would change for each one-unit change in that independent variable. An odds ratio greater than 1 indicates that the odds of having a neighborhood social tie increase with each one-unit increase in the independent variable. An odds ratio of less than 1 indicates that the odds of having a neighborhood social tie decrease with each one-unit increase in the independent variable (Liao, 1994; Menard, 1995). For example, if we used a dummy variable to compare females to males and the odds ratio for females was 1.409, this would mean that females were 40.9% more likely than males to have a neighborhood social tie.

To ascertain the relationship of residential density and auto dependence on the number of neighborhood social ties a respondent has, an ordinal logistic regression model was estimated. This type of estimation technique was employed because the dependent variable could be considered ordinal, as it is limited to four ordered categories: zero, one, two, or three neighborhood social ties (Liao, 1994). Here, the odds ratio is based on the change in the cumulative likelihood of having more neighborhood ties for each one-unit change in that independent variable (Menard, 1995). Thus, for the ordinal logistic regression, the comparison was made between having three neighborhood social ties and zero, one, or two; between having three or two ties and zero or one; or between having three, two, or one tie and zero. Again using females and males for illustrative purposes, an odds ratio of 1.286 indicates that females are 28.6% more likely than males to have three neighborhood social ties as opposed to zero, one, or two ties; 28.6% more likely than males to have three or two ties as opposed to zero or one tie; and 28.6% more likely than males to have three, two, or one tie as opposed to zero ties. For the purpose of brevity, the ordinal logistic regression results are presented as relatively more or less.

Results

Table 2 illustrates the relationships between residential density and neighborhood social ties net of gender, race/ethnicity, marital status, presence of children, educational attainment, job tenure status, income, neighborhood poverty rate, and city location. The boldface cells indicate variables that are statistically significant at the .10 level of significance. The second and third columns provide the odds ratios and the probability that the size of the impact we observed is due solely to chance, respectively, for each independent and control variable's impact on the likelihood of a respondent having a neighborhood social tie. The F-statistic in column two indicates whether or not the model as a whole is statistically significant. Clearly it is.

Existence of Neighborhood Social Ties

As Table 2 shows, neither the term measuring density nor its squared form suggests a substantial relationship between density and the likelihood of a respondent having a neighborhood social tie. The proportion of residents who drive to and from work, however, has a strong and statistically significant relationship to whether or not an individual has a neighborhood social tie. Every 1% increase in the proportion of individuals driving to work is associated with a 73% decrease in the odds of an individual having a neighborhood social tie. The likelihood of observing such a strong relationship by chance is only 1%, inspiring a great deal of confidence in this result.

Number of Neighborhood Social Ties

The story is similar for the relationship between residential density and the number of neighborhood social ties shown in the last two columns of Table 2. Once again, neither the term measuring density nor its squared form has a statistically significant effect in the model, indicating no discernible relationship between density and the number of neighborhood social ties an individual has.

In contrast, the proportion of residents who drive to and from work is significantly and negatively related to the number of neighborhood social ties a respondent has. An increase of 1% in the proportion of individuals who drive to work is associated with 71% decrease in the odds of a respondent having relatively more neighborhood social ties. The likelihood of observing such a strong relationship by chance is less than 1%, providing ample justification to be confident of the result.

The results, then, suggest a powerful relationship between the dominance of the automobile in a neighborhood as a means of transit and the social ties found there. No such effect was found for density, however. Moreover, there was little evidence to support the notion that the direction of the relationship between residential density and neighborhood social ties becomes negative at higher densities.

Discussion of Results

The findings of this study suggest that at least one characteristic of sprawl--automobile hegemony--is inimical to neighborhood social ties. The possibility that individuals who prefer social interaction with their neighbors might choose to live in more pedestrian-friendly neighborhoods, however, implies that the observed relationship could be illusory. But this seems unlikely unless less-auto-dependent neighborhoods were perceived to be more conducive to forming neighborhood social ties. And if neighborly-minded individuals act on their perceptions and flock to neighborhoods where they can form ties, as a practical matter the issue of self-selection is reduced in importance. Thus, even if self-selection were an issue, it is quite likely that less-auto-dependent neighborhoods at least facilitate the formation of neighborhood social ties.

These findings support the notion that developing more transit-oriented neighborhoods would likely enhance neighborhood social ties, either by attracting individuals who are inclined to form such ties or by causing individuals already residing there to form them. A number of studies have shown that transit-friendly neighborhoods can reduce the amount of driving (Cervero & Gorham, 1995; Cervero & Kockelman, 1996). Therefore, to the extent that we wish to increase neighborhood bonds, and there is latent demand for neighborhoods that facilitate such bonding, developing less-auto-dependent neighborhoods may help achieve this end. (Emphasis Added)

Given the intensity of the debate surrounding New Urbanism, it would not be surprising if some were tempted to use these results to buttress their positions regarding this popular planning movement. But such interpretations should be done cautiously, for reasons beyond those listed in the preceding paragraphs. For the concepts tested here--density and automobile dependence--only encapsulate part of the New Urbanist credo, which also includes mixed land uses, the promotion of civic spaces, and neighbor-friendly architecture. Thus, the results presented here are only applicable to certain aspects of the New Urbanist design. Whether these results would hold for individuals residing in a neighborhood encompassing the entire spectrum of New Urbanist principles remains unclear.

Furthermore, New Urbanists frequently cite an increased sense of community as one of their objectives. Although the measure of neighborhood social ties used here would most likely be part of anyone's notion of a sense of community, social ties by themselves do not capture the full meaning of the term. Therefore, it would be imprudent to assume that these results would also be applicable to notions of a sense of community. The results are tantalizing in suggesting that is the case, however.

To conclude, the results presented here demonstrate that there is a relationship between the level of automobile dominance in a neighborhood and the level of social ties found there. Although neither this study nor prior research is without its flaws, the accumulating evidence does appear to be weighing in favor of the notion that neighborhoods that force people into cars and inhibit face-to-face contact somehow undermine social ties among neighbors. To achieve a consensus on this matter, additional studies in other settings and with other measures of sprawl are necessary. Moreover, asking residents their motivations for choosing particular types of neighborhoods might shed some light on the role self-selection plays in the findings to date. By conducting careful, rigorous studies, planning scholars can shed light how the environments we build shape our society, and ultimately this knowledge can be used toward achieving more livable communities.

ACKNOWLEDGEMENTS

The author wishes to thank Chrishana Lloyd, Peter Marcuse, Margaret Wilder, and the anonymous referees for their thoughtful comments and suggestions.

TABLE 1. Means and standard deviations of variables used in analysis.

Variable (N=6,405)	Mean	Standard deviation
Dependent variable		
Number of neighborhood social ties		
None	.62	
One	.20	
Two	.11	
Three	.07	
Independent variables		
Density (residents per sq. km)	6,004	5,591
Percentage driving alone to work	.79	.19
Control variables		
Age in years	39.75	11.61
Length of residence in years	6.32	8.4
Female	.59	.49
Race/ethnicity		
White	.26	.44
African American	.32	.47
Asian	.15	.35
Hispanic	.26	.44
Married	.48	.50
Children	.44	.50
Highest degree		
High school diploma	.54	.50
College degree	.22	.41
Currently employed	.60	.49
Homeowner	.32	.47
Missing income data	.15	.35
Household income		
$0-$10,000	.20	.40
$10,000-$19,999	.18	.38
$20,000-$29,999	.14	.34
$30,000-$39,999	.10	.31
$40,000-$49,999	.07	.25
$50,000-$69,999	.08	.28
$70,000 or above	.08	.27
Neighborhood poverty rate	.22	.17

Note: Unweighted tabulations.

TABLE 2. Ordinal logistic regression estimates of the relationships of residential density, automobile dependence, and neighborhood social ties.

Legend for chart:

A1=Percentage driving alone to work
A2=Existence of neighborhood ties
A3=Number of neighborhood ties (0-3)
A4=Odds ratio
A5=p-value

	A2		A3	
Variable (N = 6,405)	A4	A5	A4	A5
A1	.278	.020	.293	.027
Density	.995	.150	.996	.233
Density squared	1.001	.724	1.003	.840
Age	1.002	.587	1.005	.352
Length of residence	1.017	.016	1.016	.011
Female	1.409	.002	1.286	.025
Race/ethnicity[supa]				
African American	.681	.006	.711	.013
Asian	.396	.001	.429	.002
Hispanic	.803	.198	.880	.446
Married	.931	.574	.990	.936
Children	1.555	.001	1.561	.001
Highest degree[supb]				
High school diploma	1.313	.080	1.230	.190
College degree	1.719	.002	1.506	.021
Currently employed	.709	.009	.684	.003
Homeowner	.843	.241	.871	.328
Household income[supc]				
Missing income data	.722	.175	.694	.123
$10,000-$19,999	1.472	.081	1.435	.087
$20,000-$29,999	1.044	.018	1.044	.851
$30,000-$39,999	1.219	.414	1.355	.218
$40,000-$49,999	.962	.886	.943	.822
$50,000-$69,999	1.048	.848	.957	.866
$70,000 or above	.991	.968	.947	.813
Neighborhood poverty rate	1.078	.891	.847	.771
Location[supd]				
Atlanta resident	.656	.009	.617	.001
Boston resident	.679	.032	.705	.051
Constant[supe]	.646	.060	-.732	.043
Constant[supe]			.568	.330
Constant[supe]			.490	.001
F-statistic	3.87	.001	4.39	.001

Notes: Estimates based on unweighted sample.
Bold type indicates a statistically significant relationship for a two-tailed test for an alpha of .10.
a. Non-Hispanic White is reference category.

b. High school dropout is reference category.
c. Income between $0-$9,999 is reference category.
d. Los Angeles resident is reference category.
e. The constant for number of neighborhood ties (0-3) indicates that the impact of the independent variables on the dependent variable is the same for different levels of the independent variable, but has a different intercept.

REFERENCES

Anderson, E. (1999). Code of the street. Philadelphia: University of Pennsylvania Press.

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), Handbook of theory and research for the sociology of education (pp. 241-258). New York: Greenwood Press.

Bressi, T. W. (1994). Planning the American dream. In P. Katz (Ed.), The new urbanism: Towards an architecture of community (pp. 15-28). New York: McGraw-Hill.

Burchell, R., Downs, A., Listokin, D., Phillips, H. S., Seskin, S., & Shadet, N. A. (1998). The costs of sprawl--revisited. (Transit Cooperative Research Program 39). Washington, DC: National Academy Press.

Calthorpe, P. G. (1993). The next American metropolis: Ecology, community and the American dream. Princeton: Princeton University Press.

Campbell, K. E., & Lee, B. A. (1992). Sources of personal neighbor networks: Social integration, need or time? Social Forces, 70, 1077-1100.

Cervero, R., & Gorham, R. (1995). Commuting in transit versus automobile neighborhoods. Journal of the American Planning Association, 61, 210-225.

Cervero, R., & Kockelman, K. (1996). Travel demand and the 3Ds: Density, diversity, and design. Transportation Research Digest 2, 3, 199-219.

Churchman, A. (1999). Disentangling the concept of density. Journal of Planning Literature, 13, 389-411.

Churchman, A., & Ginsberg, Y. (1984). The image and experience of high rise housing in Israel. Journal of Environmental Psychology, 4, 27-41.

Cumming, E., & Henry, W. (1961). Growing old: The process of disengagement. New York: Basic Books.

Davidson, W. B., & Cotter, P. R. (1986). The measurement of sense of community within the sphere of city. Journal of Applied Social Psychology, 16, 608-619.

Duany, A., Plater-Zyberk, E., & Speck, J. (2000). Suburban nation: The rise of sprawl and the decline of the American dream. New York: North Point Press.

Ewing, R. (1997). Is Los Angeles style sprawl desirable? Journal of the American Planning Association, 63, 107-26.

Fischer, C. S. (1982). To dwell among friends: Personal networks in town and city. Chicago: University of Chicago Press.

Glynn, T. J. (1981). Psychological sense of community: Measurement and application. Human Relations, 34, 789-818.

Jacobs, J. (1961). The death and life of great American cities. New York: Random House.

Jacobs, A., & Appleyard, D. (1987). Toward an urban design manifesto. Journal of the American Planning Association, 53, 329-334.

Johnson, J. H., Jr., Oliver, M. L., & Farrell, W. C. (1994). Understanding the contours of deepening urban inequality: Theoretical underpinnings and research design of multicity study. Urban Geography, 15, 77-89.

Lee, B. A., Campbell, K. E., & Miller, O. (1991). Racial differences in urban neighboring. Sociological Forum, 6, 525-550.

Liao, T. F. (1994). Interpreting probability models: Logit, probit, and other generalized linear models. Newbury Park, CA: Sage.

Menard, S. (1995). Applied logistic regression analysis. Newbury Park, CA: Sage.

McCarthy, D., & Saegert, S. (1978). Residential density, social overload, and social withdrawal. Human Ecology, 6(3), 253-272.

Michelson, W. (1977). Environmental choice, human behavior, and residential satisfaction. New York: Oxford University Press.

Nasar, J. L. (1997). Neo-traditional development, auto-dependency and sense of community. Proceedings of the 28th Annual Conference of the Environmental Design Research Association (pp. 39-43). Edmond, OK: Environmental Design Research Association.

Nasar, J. L., & Julian, D. A. (1995). The psychological sense of community in the neighborhood. Journal of the American Planning Association, 61, 178-184.

Oliver, M. (1988). The urban black community as networks: Toward a social network perspective. Sociological Quarterly, 29, 623-645.

Park, R. (1969). The city: Suggestions for investigation of human behavior in the urban environment. In R. Sennett (Ed.), Classic essays on the culture of cities (pp. 91-130). Englewood Cliffs, NJ: Prentice Hall.

Patterson, O. (1999). Rituals of blood: The consequences of slavery in two American centuries. Washington, DC: Civitas.

Riger, S., & Lavrakas, P. J. (1981). Community ties: Patterns of attachment and social interaction in urban neighborhoods. American Journal of Community Psychology, 9, 55-66.

Riley, M. W. (1987). On the significance of age in sociology. American Review, 52, 1-14.

Simmel, G. (1969). The metropolis and mental life. In R. Sennett (Ed.), Classic essays on the culture of cities (pp. 47-60). Englewood Cliffs, NJ: Prentice Hall.

Stack, C. (1974). All our sin: Strategies for survival in a black community. New York: Harper and Row.

Stein, C. S. (1957). Towards new towns for America. Cambridge, MA: MIT Press.

Tigges, L. M., Browne, I., & Green, G. P. (1998). Social isolation of the urban poor: Race, class, and neighborhood effects on social resources. Sociological Quarterly, 39, 53-77.

Warren, D. J. (1975). Helping networks: How people cope with problems in the urban community. Notre Dame, IN: University of Notre Dame Press.

Wilson, G., & Baldassare, M. (1996). Overall "sense of community" in a suburban region: The effects of localism, privacy and urbanization. Environment and Behavior, 28, 27- 43.

Wilson, W. J. (1987). The truly disadvantaged. Chicago: University of Chicago Press.

Wilson, W. J. (1996). When work disappears: The world of the new urban poor. New York: Alfred Knopf.

Wirth, L. (1938). Urbanism as a way of life. American Journal of Sociology, 44, 1-24.

By Lance Freeman

Freeman is an assistant professor in the Urban Planning Program at Columbia University. He has worked as a city planner for the New York County Housing Authority, and has a Master's degree and Ph.D. in city and regional planning from the University of North Carolina at Chapel Hill.

Source: Journal of the American Planning Association, Winter2001, Vol. 67 Issue 1, p69, 9p, 2 charts. Item Number: 3949026

Quotes: (45)

'The Effects of Sprawl on Neighborhood Social Ties'. Lance Freeman, The Journal of the American Planning Association, Winter 2001.

"Higher densities are important because they facilitate walking and public transportation, and when combined with mixed land uses, can place neighborhood amenities within walking distance of residents. These neighborhood amenities are not only convenient, but are places where neighbors can gather and form social bonds."

"These findings support the notion that developing more transit-oriented neighborhoods would likely enhance neighborhood social ties, either by attracting individuals who are inclined to form such ties or by causing individuals already residing there to form them. A number of studies have shown that transit-friendly neighborhoods can reduce the amount of driving (Cervero & Gorham, 1995; Cervero & Kockelman, 1996). Therefore, to the extent that we wish to increase neighborhood bonds, and there is latent demand for neighborhoods that facilitate such bonding, developing less-auto-dependent neighborhoods may help achieve this end."

'Making High-Density Sites Work'. Patrick Fitzgerald. The Urban Land Institute, Urban Land. May 2006.

"This high-density, urban housing stock has been eagerly received by today's American homebuyers—all those singles, nontraditional couples, and empty nesters who now make up the majority of U.S. households. The demand for centrally located condominiums and townhomes over the past decade has consistently equaled or, in some cases, exceeded supply."

'Open Space'. William H. Hudnet, III. The Urban Land Institute. Urban Land. October 2000.

"Recycling [land in the city] means more than simply rescuing a space from dereliction; it requires an ongoing commitment to site management, operation, and maintenance, said Blaha. "The leverage in value gained through properly developed and maintained parks is one of the great unexploited opportunities in our cities today," added Gayle Berens, ULI's vice president of real estate development practice. As Paul Morris, vice president of McKeever/ Morris Inc. in Portland, Oregon, said: "A big opportunity lies in reclaiming and recycling our lands and waterways—in essence, embarking on a new renaissance of sorts as our American cities experience advancing patterns of densification and diversification."