

Beautiful Places: The Role of Perceived Aesthetic Beauty in Community Satisfaction

Working Paper Series:
Martin Prosperity *Research*

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March 2009; revised December 2009

REF. 2009-MPIWP-008



ABSTRACT

This research uses a large survey sample of individuals across US locations to examine the effects of beauty and aesthetics on community satisfaction. We estimate by OLS, ordered logit and multinomial logit, and the findings confirm that beauty is significantly associated with community satisfaction. Other significant factors include economic security, schools, and social interaction. Further, community-level factors are significantly more important than individual demographic characteristics in explaining community satisfaction.

Keywords: Community satisfaction, Beauty, Aesthetics, Fit

JEL: R20, Z1

INTRODUCTION

Long ago, the psychologist Abraham Maslow (1943) famously theorized that human beings evolve along a well-defined hierarchy of needs, moving up a so-called ladder from basic survival to higher-order needs such as love and belonging, esteem and self-actualization. Empirical studies have documented the effects of beauty on a wide range of economic and social outcomes (Belot et al., 2007; Cassey & Lloyd, 2005; King & Leigh, 2007; Sagoff, 1981; Mossetto, 1993). Community aesthetics have been shown to effect on community satisfaction and economic outcomes in a series of empirical studies (Green, 1999; Widger, 1982; White, 1985). Urban amenities have also been found to effect the growth and development of cities and regions (Glaeser et al., 2001; Carlini & Saiz, 2008).

We argue that beauty and aesthetics play significant roles in perceived community satisfaction. That said, we recognize explicitly that beauty and aesthetics are not the only factors that drive community satisfaction, but rather that they work in tandem with other key factors, such as overall economic conditions and opportunities for social interaction, as documented in the literature.

Economists have long argued that individuals choose locations which satisfy their overall utility. Empirical studies have probed the factors that attract people to certain locations. Two that seem quite important are wage levels and housing values (Roback, 1982; Rosen, 1979). Consumer amenities also appear to play a significant role in attracting highly educated, higher income people to certain locations (Carlini & Saiz, 2008; Florida, 2002; Florida et al., 2009; Glaeser et al., 2001; Lloyd & Clark, 2001). Individuals with higher levels of education and income have been found to have greater choice of location and thus to be more satisfied

with the locations they choose (Becker, 1993; Edlund, 2005; Graves, 1979; Graves & Linneman, 1979; Rogers, 1988; Mincer, 1978; Pandit, 1997;). Sociologists and behavioral scientists suggest that information is imperfect and individuals do not always optimize their location choices: Thus, while some people have the good fortune to make good choices or to end up in a location which fits them, others end up in locations which are a poor fit and where they are dissatisfied.

A great deal of research has probed how characteristics of the community as well as individual economic and demographic factors affect how satisfied people are with their communities (Cuba & Hummon, 1991; Hunter, 1975; Keller, 1968; Riger & Lavrakas, 1981; Schulman, 1975). Home ownership and the length of residence have been shown to effect community attachment (Fischer, 1977; Gerson et al., 1977; Sampson, 1988). Other community characteristics such as local leadership, housing quality, the level of diversity, culture, and the supply of public goods also appear effect how satisfied people are in their communities (Cuba & Hummon, 1993; Adams, 1992; Fried, 1984). Social capital and social interaction shape community satisfaction as well (Fischer, 1977; Grillo et al. 2008; Hunter, 1975; Nisbet, 1969; Putman, 2000; Sarason, 1974).

We examine the effects of beauty and aesthetics in light of these factors that extant research shows to effect community satisfaction. Taking these factors into account, we expect that in a relatively affluent, post-industrial context where basic physical and economic survival is a less explicit concern for most individuals, “higher-order” factors such as beauty and aesthetics will be a significant factor in determining community satisfaction. To test for this, we utilize data from a large-scale survey of community satisfaction conducted with the Gallup Organization. The survey collected detailed data from some 28,000 respondents on

individual-level demographic characteristics such as income, housing values, job opportunities, education levels and to community-level characteristics such as aesthetics and beauty, availability of jobs and economic trends, the supply of public goods, cultural opportunities, outdoor recreation, and the ability to meet people and make friends.

THEORY AND CONCEPTS

In a seminal article, Tiebout (1956) famously argued that individuals express their level of community satisfaction by “voting with their feet.” As such, location choice is like a market, where individuals choose to locate in communities that offer the most attractive bundle of public services and taxes. In the same way that an individual satisfies his or her demand for private goods by purchasing them through the market, the demand for public services is satisfied by moving to region with the appropriate selection of taxes and services. In other words, migration enables individuals to identify the community that best fits their preferences. Economists thus assume individuals to be efficiently distributed across regions and, as a result, primarily located in the communities that best satisfy their utility.

But not everyone does, or even can, move. The question then becomes what separates those who move from those who stay put? We know that migration is shaped by individual characteristics such as education, age, gender and income. These factors influence migration through their effects on perceived utility gains from a change in location (Becker, 1993; Edlund, 2005; Graves, 1979; Graves & Linneman, 1979; Mincer, 1978; Pandit, 1997; Rogers, 1988). Individuals who anticipate they have less to gain from migration are more likely to remain or stay, while those who anticipate the largest potential gains are most likely to move.

Key factors in this locational calculus are wage levels and housing values (Greenwood, 1973; Sjaastad, 1962; Thirlwall, 1966). Furthermore, differences in regional amenities can compensate for lower wage or income levels or higher housing costs (Roback, 1982; Rosen, 1979).

Where traditional economics stress perfect information and rational choice of communities, behavioralists focus on imperfect information and the question of “fit.” Wolpert (1965) suggests that individuals have a bias against moving. He concludes that since individuals have a limited ability to gather complete information about alternatives, there will always be a spatial information bias towards the current location and geographically approximate locations. Fried (1963) coined the term “spatial identity” and Proshansky et al. (1983) use “place identity” to describe how place itself –home, work and school environment –defines an individual’s sense of being in a particular location. Other research has focused on the attitude of “being at home” – a location that is a good fit where one feels comfortable, familiar, and can express an authentic sense of self (Relph, 1976; Rowles, 1983; Seamon, 1979). Community satisfaction is associated with the length and likelihood of staying in a community (Barcus, 2004; Galster & Hesser, 1981; Speare, 1974; Michelson, 1977; Stapleton, 1980).

The differences in economics and behavioral perspectives on mobility and community satisfaction are worth noting. Generally speaking, economists assume perfect information. They thus stress the ability of individuals to choose locations which maximize their utility. This in turn creates an efficient allocation of individuals through migration based on regional wage levels, housing values and presence of amenities. Behavioralists start from the assumption of limited information. Since information about other places is limited, there will

be a less efficient allocation of individuals across locations and a larger variation of individuals who are satisfied or unsatisfied with their locations.

As noted above, our primary focus here is on the effects of beauty and aesthetics on community satisfaction. According to Maslow (1943), human beings evolve along a well-defined hierarchy of needs, moving up from basic survival needs to love and belonging, esteem and self-actualization. Postrel (2003) amends this perspective suggesting that the movement from basic to higher-order needs does not progress in a simple linear fashion, but that human beings have long been responsive to beauty and aesthetic considerations, regardless of level of development, income levels or cultural contexts.

Recent studies have documented the economic value of beauty in a variety of different contexts, from politics (King & Leigh, 2007) and art (Sagoff, 1981) to game shows (Belot et al., 2007), as well as in traditional economic models (Cassey & Lloyd, 2005; Mossetto, 1993). A series of studies have probed the effects of aesthetics on community satisfaction and community economic development. Several studies (Andrews & Withey, 1974; Newman & Duncan, 1979; Zehner & Chapin, 1974) show how a well-maintained community has a positive impact on community satisfaction. Others find that community satisfaction is affected by the perceived beauty of the place (Widgery, 1982), that aesthetic qualities matter to the same extent as social support or social belonging (White, 1985), and that the beauty of the natural landscape is associated with more positive assessments of community character (Green 1999).

There is an extensive literature on the role of amenities in residential choice, regional development and community satisfaction. Ullman (1954) demonstrated the significant

influence of desirable living conditions such as climate and landscape in explaining regional differences in economic growth. Gottlieb (1994, 1995) found that amenities such as environment, schools, as well as lower levels of congestion and crime attract highly-skilled people and, by extension, firms searching for highly-skilled labor. Amenities have been found to effect regional growth and development (Carlino & Saiz, 2008; Glaeser et al., 2001). Lloyd & Clark (2001) describe the city as an “entertainment machine” that offers lifestyle-related amenities in the form of entertainment, nightlife and culture. Florida (2002) shows the role of openness, inclusiveness and lifestyle related amenities in attracting creative individuals.

Social interaction also has been found to effect levels of community satisfaction. Studies have found that the opportunity for social interaction within neighborhoods is related to higher levels of mental health (Nisbet, 1969; Sarason, 1974) and that levels of social participation are associated with community identity (Cuba & Hummon 1993). Other studies find that a sense of belonging in a neighborhood effects community satisfaction independent from levels of social involvement (Fischer, 1977; Hunter, 1975). Civic engagement also has been found to matter to community satisfaction (Putman, 2000). Civic engagement appears closely related to community qualities, including both basic offerings such as quality public schools, transportation system and quality healthcare; and lifestyle amenities such as cultural opportunities, a vibrant nightlife and outdoor activity opportunities (Grillo et al. 2008). Brehm & Rahn (1997) suggest that civic engagement is a product of life satisfaction. Attachment to community also tends to grow and become stronger over time (Sampson, 1988). Early work on urbanization and community by Wirth (1938) argued that increased community scale, density and heterogeneity decreased personal attachment to a location. Jacobs (1961, 1969) & Gans (1962) focused on the advantages created by diversity and

heterogeneity of cities. However, more recent research questions the existence of an explicit relationship between urban size and level of attachment (Gerson et al., 1977; Kasarda & Janowitz, 1974; Sampson, 1988).

Community satisfaction is also related to social and demographic factors such as home ownership, race, class and age (Cuba & Hummon, 1995; Hunter, 1975; Keller, 1968; Schulman, 1975). Life stages have been found to play an important role in community attachment (Riger & Lavrakas, 1981). Fischer (1977) finds that individuals without children are less attached to their neighborhoods. Older people and families with children in the household tend to be more engaged and attached to their communities.

So how do individual level and community level factors interact in affecting community satisfaction? Fried (1984) integrates both personal and community characteristics in order to analyze their effect on well-being. He also categorizes the factors that shape the overall community satisfaction or dissatisfaction of individuals. He makes distinctions between local residential satisfaction, local convenience satisfaction, local interpersonal satisfaction, and local political satisfaction. Residential satisfaction relates to the immediate local environment, including the neighborhood and dwelling quality, as well as housing quality. Convenience satisfaction is associated with local shopping, parks and recreation, culture and sport, and public services such as schools, work locations and transportation systems. Interpersonal satisfaction is effected by density and the geographic distance between people. Political satisfaction is associated with local leadership, educational opportunity, and its responsiveness and delivery of key services. These four factors also seem to be largely independent of general personality traits. Fried finds that community satisfaction is the second most important variable in general life satisfaction, after marital satisfaction. Adams

(1992) finds that neighborhood satisfaction is associated with overall quality of life, even when marriage, education, race and age variables are included.

The flip side of community satisfaction is community dissatisfaction (Lee & Guest, 1983; Loo, 1986; Marans & Rodgers, 1975; Parkes et al., 2002; Spain, 1988). At the individual level, higher levels of community dissatisfaction are associated with lower incomes, higher levels of renters, shorter length of residence, minority status, younger people, and unemployment. In terms of community characteristics, five factors have been found to be associated with community dissatisfaction: financial hardship, poor neighborhood resources and reputation, exposure to neighborhood problems, social marginalization, and depressed expectations

METHODOLOGY AND CONCEPTS

Our central hypothesis is that beauty and aesthetic factors play a considerable role in community satisfaction. To examine this, we use data from a large scale survey of community satisfaction conducted with the Gallup Organization. The survey asked people direct questions about their level of satisfaction with their communities and included questions specifically relating to a respondent's perception of beauty and aesthetics in his or her community. The survey collected detailed data on community-level perceptions relating to job and economic security, the supply of public goods, and expectations about the future as well as standard demographic and economic characteristics, including age, gender, marital status, educational levels, number of children in the household as well as their income, home ownership, length of the current residency, and city size.

The survey covered roughly 28,000 people across all 50 U.S. states, all major U.S. cities and metro regions and includes some 8,000 communities across the United States nationwide.

Carried out by the Gallup Organization in July-August in 2006 the survey sample is Gallup's panel and is representative across states, cities, metros, and type of community, that is, urban, suburban and rural. It is also fully representative across income, occupation, education, age, race and ethnicity, household type, and sexual orientations. The response rate was 70.3 percent.

We note, however, that not all questions were answered by the respondents. Those questions relating to community factors and the probability of staying or moving had a response rate of 50.7 percent. The inclusion of control variables concerning education level, age, gender, and marital status reduces the sample to 2,029 observations because individual information was not collected for the entire sample. Because of this reduction the regression analysis is carried out in two versions; one with control variables (with the reduced sample) and one without the control variables included (with the larger sample), in order to analyze possible differences.

VARIABLES

Dependent variable: The dependent variable measures *community satisfaction*. Specifically, it is based on the survey question: "Taking everything into account, how satisfied are you with the city or area where you live?" Responses were ranked on a 1-5 Likert scale, where 1=not at all satisfied, and 5=extremely satisfied.

Independent Variables: We employ two classes of independent variables.

(1) Dimensions of Community Satisfaction

The survey included a series of questions designed to gauge the various dimensions of community satisfaction, with regard to economic security, basic services, openness and aesthetics, as follows. All questions were phrased as “How would you rate the city or area where you live on (...)?” and response categories were based on a 1-5 Likert scale, where 1=very bad and 5=very good. Table 1 provides descriptive statistics for these variables. Full descriptive statistics for the reduced sample with control variables is provided in Appendix 1.

(Table 1 about here)

It is interesting to see that among the 27,883 individual respondents, the mean value for overall community satisfaction is 3.79, indicating that most people are quite satisfied with their current location. This finding supports the Tiebout-inspired hypothesis that individuals are efficiently allocated across communities, at least according to their preferences.

(2) Individual Demographic Variables

We also examine the role of individual-level economic and demographic characteristics, including, age, gender, marital status, children, education, income level, housing tenure (owner versus renter), length of time in current community, and type of location (urban, suburban or rural).

All variables, community as well as individual characteristics, come from the Gallup survey.

Cluster Analysis:

In order to find out more about the possible interdependencies of the community characteristics explanatory variables, we ran a hierarchical cluster analysis. A cluster analysis is a method for identifying homogenous subgroups in cases of a population. It seeks to identify a set of subgroups that minimize the within-group variation and at the same time maximize the between-group variation. We use perceived qualities of the community (ranked

from 1 to 5) to generate the clusters. We show the variable clusters with a dendrogram (Figure 1) which illustrate the cohesiveness of the clusters formed and provides information about the appropriate number of clusters.

(Figure 1 about here)

Among the most important of these findings, we see that regions perceived as beautiful and with an attractive physical setting also typically score highly on the outdoor parks, playgrounds and trails. Another cluster comprises places with perceived good climate as well as good air quality. In fact, the most compelling finding is that while many of the variable clusters tell different stories – that is they do not appear to contain the same information, since the clustering is generally made within a similar distance -- the main exception is the close connection between beauty of physical setting and outdoor parks, playgrounds and trails.

Methods of Analysis

We use three multivariate statistical techniques to examine the relative effects of individual- and community-level factors on community satisfaction as outlined above. First, we use ordinary least square (OLS) regression, based on the ordinary assumptions about an ordinal, interval scale, as well as a linear relation and no autocorrelation. Second, we run ordered logit regressions given the structure of the data, in particular the fact that the dependent variable is based on a 1-to-5 Lickert scale. Ordered logit regression enables us to further account for differences between low, medium and high community satisfaction levels. We present the results from the overall ordered logit estimation, and also the marginal effects for each of the

different city satisfaction rank outcomes. Third, we run a multinomial logit regression to control for the robustness of the results.

FINDINGS

We now report the findings for our multivariate analysis of the factors associated with community satisfaction. Table 2 presents the results of OLS and ordered logit estimations. The variables are classified in four major groups: economic security, basic services, openness and social capital, and aesthetics. Table 3 presents the results of the same multivariate models this time with control variables included. The inclusion of control variables reduces the sample significantly because of the lower number of responses to questions relating to those variables. Therefore, we run the same regressions a second time excluding the control variables. Our discussion of the results reflects all three types of regressions (OLS, ordered logit and multinomial logit), but mainly focuses on the model where individual characteristics control variables are included. The results for the multinomial regression are summarized in Appendix 2.

(Table 2 about here)

The OLS regression, with and without the control variables, generates a R² value of roughly 0.5. The ordered logit generates a pseudo R² of approximately 0.25 and the pseudo R² in the multinomial logit regression is also .25. However, it should be noted that the pseudo R² is not comparable to the R² of the OLS regression, and the pseudo R² cannot be interpreted as a “goodness to fit”-measure in the same way as the R² value from the OLS. This OLS R²

value is likely affected to some degree by the low variance of community satisfaction rank, given most respondents appear highly satisfied with their communities. Given the large number of observations, it is not surprising to see that the majority of variables appear significant. From the t- and z-values we can detect a relatively stronger explanatory value from the community related variables than from individual characteristics.

The exclusion of control variables does not change the performance of the models in any significant way. The adjusted R² in the OLS regression changes only slightly from 0.504 to 0.495; the pseudo R² in the OLS regression, changes from 0.261 to 0.252. This result is expected given that those factors taken together only generated an adjusted R² of 0.039 or pseudo R² of 0.014 in explaining community satisfaction. For the multinomial logit regression the pseudo R² changes from 0.249 to 0.231, when we exclude all the control variables, and when we run the regression only based on these we get a pseudo R² equal to 0.022. Once more, we recall that the pseudo R²s is not comparable with the R² generated in the OLS regression. While we observe a certain upper bias in the estimation of the coefficients, their relative strength, as measured by the standardized beta values, is unaffected.

Current economic conditions, quality of public schools, the community being a good place to meet people and make friends, and the physical setting continue to be the most important factors related to the overall community satisfaction, both in the OLS and in the ordered logit regression. The same four factors also turned out the strongest across all versions of the initial multinomial logit regression. When the individual control variables are excluded, the job opportunity variable becomes somewhat stronger. It could be that this factor captures, to a larger extent, information that was included in the control variables, such as income or

educational level. However, the relative importance of this factor remains far behind factors such as meeting friends or beauty and physical settings. Availability of public transportation, access to vibrant night life and quality of colleges and universities remain negative and significant.

To derive more information about the estimated coefficients for each of the possible outcomes (city satisfaction 1-5), we now move on to the marginal effects, both with individual control variables (Table 3) and without them (Table 4) . These tables present the derivatives as well as the z-score values. The marginal effects for the regression without control variables are presented in Appendix 2. For each of these regressions, we also ran a multinomial logit regression to make sure the estimated coefficients are robust and consistent. We focus on the z-scores to discuss the relative strength of the explanatory variables in the estimations of the models where we include the individual characteristics control variables.

(Table 3 about here)

(Table 4 about here)

Community Characteristics

Beauty and aesthetics: The estimated coefficient for beauty and aesthetics was one of the strongest in the OLS regression. It is also one of the strongest for all five outcomes in the ordered logit (Table 3), ranked approximately third based on the z-values, which range from 4.5-7.35. In the multinomial logit, where the z-values range from 1.23-6.29, it ranks second

in comparison to the other variables at the highest levels of community satisfaction, and third at lower levels of community satisfaction. The cluster analysis illustrates how closely this factor is related to outdoor parks, but in this multivariate context beauty and esthetics turn out to be more closely related to community satisfaction. The results for the multinomial logit regression indicate even stronger performance for beauty at higher levels of community satisfaction (see Appendix 2).

Current economic conditions: The coefficient for this variable is slightly stronger than for beauty and aesthetics in the OLS regression, where it is the strongest explanatory variable in the model. In the ordered logit, the z-values range from 4.82-9.65, and it has the strongest marginal effect among all explanatory variables for all five versions of the regression. It is also the strongest variable for the highest levels (4 and 5) of community satisfaction in the multinomial logit. This is not surprising given that overall economic conditions tend effect many other factors related to community satisfaction. Recall that the findings from cluster analysis indicate that current economic conditions are closely associated with good job opportunities. However, among the two, current economic conditions are clearly the strongest variable of the two. This variable also performs well in the multinomial logit regression. It is the strongest factor where community satisfaction is ranked from 3-5, but somewhat weaker at the lower levels of community satisfaction.

Ability to meet people and make friends: This turns out to be the fourth strongest variable in the OLS regression. In the ordered logit regression it generated z-score of 4.24-6.49. In the multinomial logit regressions, it was even stronger in the regressions where individuals ranked the community satisfaction equal to 3-4. This supports the findings of previous studies which have found that social interaction to matter significantly for community satisfaction.

Once more, the findings are consistent for all three sorts of estimations (OLS, ordered logit and multinomial logit).

Schools: This variable which reflects perceived quality of schools is also significant with a magnitude similar to the other three (beauty, current economic conditions and the ability to meet people and make friends). This is line with economic and sociological literature as well as common sense - communities with better schools have higher levels of satisfaction. A strong public school system indicates that a community is able to provide a positive environment for children and, as a result, is among the most influential factors influencing the location preferences of parents and families. The school variable was also one of the four strongest variables in the OLS regression earlier, both with and without individual characteristics control variables. In the ordered logit regression the quality of public schools performs approximately equally well across all five regressions. However, we can detect a difference when we re-run it as a multinomial logit. Here, the lack of high quality public schools is the strongest variable in order to explain why individuals rank their community satisfaction equal to 1 or 2. However, at higher levels of community satisfaction, the relative importance of this variable tends to decrease.

Several other variables were significantly related with community satisfaction though with weaker explanatory power. The variable for “being able to get from place to place with little traffic” was significant and positive in the OLS regression. In the ordered logit the z-values range from 3.84-5.37. However, it is not significant at the lower levels of community satisfaction in the multinomial logit regression. The variable for quality health care is positive and significant in the OLS regression, and had z-values ranging from 2.72-3.09 in the ordered logit. The variable for future economic conditions is also significantly related with

community satisfaction in all five ordered logit regressions. In the multinomial logit regression, this variable is significant for the community satisfaction levels 2 to 4. The cluster analysis also shows that this factor does not tend to cluster with any other community related variable, but rather stands on its own. The coefficient for religious institutions is significant but somewhat weaker at the lowest levels of community satisfaction in the ordered logit, and only significant at the middle and highest level of city satisfaction in the multinomial logit context.

The coefficient for cultural opportunities is positive and significant at the five percent level in the OLS regression. It has z- values of 2.27-2.50 in the ordered logit regression (significant at the five percent level), while the multinomial logit shows a result of the highest significance for community satisfaction ranked equal to 3-4. The result for cultural diversity, which has been highlighted in other studies (Knox & Taylor, 1995; Scott, 1997), is weaker than might be expected.

The coefficient for affordable housing is positive and significant at the 0.01 level in the OLS. It is also significant with z-values between 2.74-3.11 in the ordered logit. In the multinomial logit context, affordable housing is hardly significant at all. In the cluster analysis, this variable tends to be the most closely related to regions without congestion, but this factor is relatively weaker. This result is interesting since much of the literature discussed above finds it to be an important factor in determining community satisfaction. While our results show it to be significant, it appears significantly less influential than other factors.

The coefficient for climate is significant at the 0.1 level in the OLS, but was slightly stronger in the ordered and multinomial logit estimations, and significant at the 0.05 level. The cluster

analysis suggests a close relationship between climate and air quality. The latter is not a significant factor in our analysis. The findings stand in contrast to both previous studies and the conventional wisdom which suggest that climate plays a substantial role in community satisfaction. In the OLS regression, public transportation was significant at the five percent level. In the ordered logit it was only significant (at the 0.05 level) for the community satisfaction rank 3 and 5, and hardly significant in the multinomial logit regression.

Several other variables are significant, such as colleges and universities which tend to be negative in relation to higher levels of community satisfaction; a pattern that also holds for nightlife. The average age of the individuals taking the survey was 55 which might impact these results. In order to control for this, we split the data file according to age and re-ran the regressions (OLS, ordered logit and multinomial logit), still with a consistent result. For younger people between 20 to 30 years of age, the results, for marginal effects for all five community satisfaction outcomes, are significant at the 5 percent level, and negative for higher levels of community satisfaction. For college and universities we find similar relationships, but significance at the 1 percent level.

Individual characteristics

We now move on to the findings for individual characteristics. Generally speaking, these individual characteristics explain far less variation in the satisfaction levels than the community-related factors in our regression. We ran an OLS where community satisfaction was explained only by the individual characteristics, a regression that generated an R2 equal to 0.041. This suggests that less than five percent of the variation is explained by individual characteristics. We also ran an ordered logit and multinomial logit regression with only

individual characteristics included; however these models explained very little variation in overall community satisfaction, with a pseudo R² values of only 0.0142 (ordered logit) vs. 0.022 (multinomial logit). However, these pseudo R²s should not be interpreted as a goodness to fit which is less than the one in the OLS regression.

Income and education: Both variables are significantly related to community satisfaction in the OLS regression at the 0.05 level, with education being the stronger of the two. The same results also hold in the ordered logit regression. Higher education levels, as well as higher incomes, are generally associated with higher levels of community satisfaction. Note that the correlation income and education is 0.316, which more or less excludes that they include the same information. The results for these variables likely reflects the simple fact that individuals with higher levels of education and incomes have greater choice in selecting their locations. Both income and education performed relatively less well in the multinomial logit regressions for the higher levels of community satisfaction.

Gender: Gender is significant at the 0.05 level in the OLS regression, but only at the 0.1 level in the ordered logit. It appears that women are slightly more satisfied with their communities than men. Our results may suggest that women pay more attention to selecting communities that satisfy them, or perhaps that because women tend to spend more time at home they may have a greater incentive to invest in neighborhood social networks which improve their satisfaction. Gender is not significant in the multinomial logit regressions.

Housing types: Individuals who rent their residence are generally less satisfied with their communities than homeowners. This factor is significant at the 0.1 level in the OLS regression. However, it is not significant in the ordered or multinomial logit regressions.

The following factors are insignificant, no matter what estimation technique we used: job opportunities, air quality, age, marital status, children, length of stay, and rural versus urban location.

CONCLUSIONS

Our main hypothesis is that the beauty and aesthetic characteristics of places have a significant effect on perceived community satisfaction. Recall that our hypothesis explicitly states that we do not think that beauty and aesthetics are the only factor that matter to community satisfaction, but rather that they are likely to operate alongside other key factors, some of which - for example, economic conditions and social interactions - have been highlighted in the literature.

Our main findings confirm the hypothesis: beauty and aesthetics are among the most important factors in perceived community satisfaction. Our findings for beauty and aesthetics lend support to those by Glaeser et al. (2001), and Carlino and Saiz (2008), among others, who highlight the importance of amenities in urban and regional development.

We also found our measure of the perceived quality of schools to be positively and significantly associated with higher levels of community satisfaction. Actually, this makes a good deal of sense, particularly in light of a simple Maslow construct that perceptions of beauty and aesthetics matter alongside a secure economic environment which can deliver on basic economic needs and high quality schooling to prepare children for the future.

In addition, we found that social interaction – specifically our measure of the perceived ability to meet people and make friends – to be closely associated with higher levels of community satisfaction. This finding is in line with a wide range of sociological research which has found that social networks and opportunities for social interaction have a significant effect on community satisfaction (Landale & Guest, 1985; Putnam, 2000).

Moreover, our findings suggest a much smaller role for individual level or personal characteristics in community satisfaction. The effects of factors such as age, gender, income, education, length of residence, and home ownership on community satisfaction were relatively small. In addition, factors such as age and length of stay in a community showed no effect. These findings contrast to those of previous studies by Gerson et al. (1977); Fischer, (1977) & Sampson (1988) which found positive relations between length of stay and community attachment, but they offer support for Parkes et al. (2002) who found that young individuals more often tend to be dissatisfied with their communities. We found no relationship between community satisfaction and marital status, the presence of children, or rural versus urban location. This contradicts earlier research has found that life stage factors and presence of children have significant influence on community satisfaction (Cuba & Hummon, 1993; Hunter, 1975; Keller, 1968; Riger & Lavrakas, 1981; Schulman, 1975).

Generally speaking, our findings suggest a holistic framework is useful for understanding community satisfaction. A community that satisfies its residents, according to our findings, appears to be one that provides a solid economic foundation, provides abundant opportunities for social interaction, offers good schools, and is also perceived as beautiful and aesthetically pleasing. While a number of other community characteristics were found to be significant, they were not nearly as strongly related to community satisfaction as these key factors.

We want to reiterate that the way we interpret our findings is not to say that beauty and aesthetic factors are the only or predominant factors that shape perceived community satisfaction, but that they operate alongside a cluster of influential factors including economic conditions, good schools, and opportunities for social interaction. The effect of beauty and aesthetics indicates that community satisfaction is something more than a Maslow process, where individuals and communities move up a simple ladder of higher order needs, and rather that beauty and aesthetics operate more like what Postrel (2003) described as a holistic set of factors that, when taken together, result in higher levels of perceived community satisfaction. Our findings suggest that beauty and aesthetics are an under-appreciated factor in community satisfaction and one that should be the subject of further research.

ACKNOWLEDGEMENTS:

We thank the reviewers, Jason Rentfrow, Thomas Holgersson, David Wilson and Glen Whyte for helpful comments and suggestions and Scott Pennington for research assistance. We also thank the Gallup Organization for access to the data.

REFERENCES

- Adams, R. E. (1992). Is Happiness a Home in the Suburbs? The Influence of Urban vs. Suburban Neighborhoods on Psychological Health. *Journal of Community Psychology, 20*, 353-372.
- Andrews, F. M., & Withey, S. B. (1974). Development Measures of Perceived Life Quality. *Social Indicators Research, 1*, 1-26.
- Belot, M., Bhaskar, V., & van de Ven, J. (2007). Is Beauty Only Skin Deep? Disentangling the Beauty Premium on a Game Show. *Economics Discussion Papers 624*, University of Essex, Department of Economics.
- Barcus, H. R. (2004). Urban-Rural Migration in the USA: An Analysis of Residential Satisfaction. *Regional Studies, 38*(6), 643-657.
- Becker, G. (1993). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. Chicago, IL: The University Press of Chicago.
- Brehm, J. Rahn, W. (1997). Individual-Level Evidence for the Causes and Consequences of Social Capital. *American Journal of Political Science, 41*(3), 999-1023.
- Carlino, G. A., Saiz, A. (2008). City Beautiful, *Working Paper No. 08-22*. Retrieved from Research Department, Federal Reserve Bank of Philadelphia <http://www.philadelphiafed.org/research-and-data/publications/working-papers/2008/wp08-22.pdf>
- Cassey, L., Lloyd, P. J. (2005). Beauty and the Economist: The Role of Aesthetics in Economic Theory. *Kyklos, 58*(1), 65-86.
- Cuba, L., & Hummon, D. M. (1993). A Place to Call Home: Identification with Dwelling, Community, and Region. *The Sociological Quarterly, 34*(1), 111-131.
- Edlund, L. (2005). Sex and the City. *Scandinavian Journal of Economics, 107*(1), 25-44.
- Fischer, C. S. (1977). *Networks and Places: Social Relations in the Urban Setting*. New York: The Free Press.
- Florida, R. (2002). *The Rise of the Creative Class*. New York: Basic Books.

- Florida, R., Mellander, C., & Stolarick, K. (2009). Should I Stay or Should I Go Now: how and why community satisfaction affect mover-stayer decisions. Martin Prosperity Institute Working Paper
- Fried, M. (1963). Grieving for a Lost Home. *The Urban Condition* L. J. Duhl (Ed.). New York: Basic Books, 151-171.
- Fried, M. (1984). The Structure and Significance of Community Satisfaction. *Population and Environment*, 7(2), 61-86.
- Galster, G. C., & Hesser, G. W. (1981). Residential Satisfaction: Compositional and Contextual Correlates. *Environment and Behavior*, 13(6), 735-758.
- Gans, H. (1962). *The Urban Villagers: Group and Class in the Life of Italian-Americans*. New York, NY: Free Press of Gencoe.
- Gerson, K. C., Stueve, A., Fischer, C. (1977). Attachment to Place. *Networks and Places* Fischer et al., (Ed.). New York, NY: The Free Press.
- Glaeser, E. L., Kolko, J., Saiz, A. (2001). Consumer City. *Journal of Economic Geography*, 1, 27-50.
- Gottlieb, P. D. (1994). Amenities as an Economic Development Tool: Is there Enough Evidence? *Economic Development Quarterly*, 8(3), 270-285.
- Gottlieb, P. D. (1995). Residential Amenities, Firm Location and Economic Development. *Urban Studies*, 32, 1413-1436.
- Graves, P. E. (1979). A life-cycle empirical analysis of migration and climate, by race. *Journal of Urban Economics*, 6, 135-147.
- Graves, P. E., Linneman, P. (1979). Household migration: Theoretical and empirical results. *Journal of Urban Economics*, 6, 383-404.
- Green, R. (1999). Meaning and Form in Community Perception of Town Character. *Journal of Environmental Psychology*, 19, 311-329.

- Greenwood, M. J. (1973). Urban economic growth and migration: Their interaction. *Environment and Behavior* A, 5, 91-112.
- Grillo, M. C., Teixeira, M. A., Wilson, D. C. (2008). Social Capital and Civil Engagement: The Role of Community Level Variables in Fostering Civic Engagement in Communities. *Paper presented at the 38th annual meeting of the Urban Affairs Association*. Baltimore, MD.
- Hunter, A. (1975). The Loss of Community: An Empirical Test through Replication. *American Sociological Review*, 40, 537-552.
- Jacobs, J. (1961). *The Death and Life of Great American Cities*, New York, NY: Random House.
- Jacobs, J. (1969). *The Economies of Cities*. New York, NY: Random House.
- Kasarda, J. D., Janowitz, M (1974). Community Attachment in Mass Society. *American Sociological Review*, 39, 328-339.
- Keller, S. (1968). *The Urban Neighborhood: A Sociological Perspective*. New York, NY: Random House.
- King, A., & Leigh, A. (2007). Beautiful Politicians. *Working Paper Series*. Retrieved from Social Science Research Network http://papers.ssrn.com/sol3/papers.cfm?abstract_id=961138
- Knox, P. L., & Taylor, P. J. (1995). *World Cities in a World-System*. Cambridge: Cambridge University Press.
- Krupat, E. (1985). *People in Cities: The Urban Environment and Behavior*. New York, NY: Cambridge University Press.
- Landale, N. S., & Guest, A. M. (1985). Constraints, satisfaction, and residential mobility: Speare's model reconsidered. *Demography*, 22, 199-222.
- Lee, B. A., & Guest, A. M. (1983). Determinants of Neighborhood Satisfaction: A Metropolitan Level Analysis. *The Sociological Quarterly*, 24, 287-303.
- Lloyd, R., & Clark, T. N. (2001). The city as an entertainment machine. *Research in urban sociology: Critical perspectives on urban redevelopment*, 6, 357-378.

- Loo, C. (1986). Neighborhood Satisfaction and Safety: A Study of a Low-Income Ethnic Area. *Environment and Behavior*, 18(21), 109-131.
- Marans, R. W., Rodgers, W. (1975). Toward an Understanding of Community Satisfaction. In M. Janowitz & G. Suttles (Eds.), *Metropolitan America in Contemporary Perspective*. New York: Sage Publications.
- Maslow, A. H. (1943). A Theory of Human Motivation. *Psychological Review*, 50(5), 370-396.
- Michelson, W. (1977). *Environmental Choice, Human Behavior, and Residential Satisfaction*, Oxford, UK: Oxford University Press.
- Mincer, J. (1978). Family Migration Decisions. *The Journal of Political Economy*, 86(5), 749-773.
- Mossetto, G. (1993). *Aesthetics and Economics*. Dordrecht: Kluwer Academic Publishers.
- Newman, S. J., & Duncan, G. J. (1979). Residential Problems, Dissatisfaction, and Mobility. *Journal of the American Institute of Planners*, 45, 154-166.
- Nisbet, R. A. (1969). *The Quest for Community*. New York: Oxford University Press.
- Pandit, K. (1997). Cohort and period effects in U.S. migration: How demographic and economic cycles influence the migration schedule. *Annals of the Association of American Geographers*, 87(3), 439-450.
- Parkes, A., Kearns, A., & Atkinson, R. (2002). What Makes People Dissatisfied with their Neighbourhoods?, *Urban Studies*, 39(13), 2413-2439.
- Postrel, V. (2003). *The Substance of Style: How the Rise of Aesthetic Value is Remaking Commerce, Culture, and Consciousness*. New York: HarperCollins.
- Proshansky, H. M., Fabian, A. K., & Kaminoff, R. (1983). Place Identity: Physical World Socialization of the Self. *Journal of Environmental Psychology*, 3, 57-83.
- Putnam, R. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Relph, E. C. (1976). *Place and Placelessness*. London: Pion.

- Riger, S., & Lavrakas, P. J., (1981). Community Ties: Patterns of Attachment and Social Interaction in Urban Neighborhoods. *American Journal of Community Psychology*, 9(1), 55-66.
- Roback, J. (1982). Wages, Rents, and the Quality of Life. *The Journal of Political Economy*, 90(6), 1257-1278.
- Rogers, A. (1988). Age patterns of elderly migration: An international comparison. *Demography*, 25(3), 355-370.
- Rosen, S. (1979). Wage-based indexes of urban quality of life. In P. Mieszkowski & P. Straszheim (Eds.), *Current Issues in Urban Economics*. Baltimore: Johns Hopkins University.
- Rowles, G. D. (1983). Place and Personal Identity in Old Age: Observations from Appalachia. *Journal of Environmental Psychology*, 3, 299-313.
- Sagoff, M. (1981). On the Aesthetic and Economic Value of Art. *The British Journal of Aesthetics*, 21(4), 318-329.
- Sampson, R. J. 1988). Local Friendship Ties and Community Attachment in Mass Society: A Multilevel Systemic Model. *American Sociological Review*, 53, 766-779.
- Sarason, S. B. (1974). *The Psychological Sense of Community: Prospects for Community Psychology*. San Francisco: Jossey-Bass.
- Seamon, D. (1979). *A geography of the lifeworld: movement, rest, and encounter*. New York: St. Martin's Press.
- Schulman, N. (1975). Life-Cycle Variations in Patterns of Close Relationships. *Journal of Marriage and the Family*, 37, 813-821.
- Scott, A. (1997). The Cultural Economy of Cities. *International Journal of Urban and Regional Research*, 21(2), 323-339.
- Sjaastad, L.A. (1962). The costs and returns of human migration. *Journal of Political Economy*, 70(1), 80-93.

- Spain, D. (1988). The Effect of Changing Household Composition on Neighborhood Satisfaction. *Urban Affairs Quarterly*, 23(4), 581-600.
- Speare, A. (1974). Residential Satisfaction as an Intervening Variable in Residential Mobility. *Demography*, 11(2), 173-188.
- Stapleton, C. M. (1980). Reformulation of the Family Life-Cycle Concept: Implications of Residential Mobility. *Environment and Planning A*, 12(10), 1103-1118.
- Tiebout, C. M. (1956). A Pure Theory of Local Expenditures. *The Journal of Political Economy*, 64(2), 416-424.
- Thirlwall, A. P. (1966). Migration and Regional Unemployment. *Westminister Bank Review*, 31-44.
- Ullman, E. L. (1954). Amenities as a Factor in Regional Growth. *Geographical Review*, 44, 159-132.
- Wirth, L. (1938). Urbanism as a Way of Life. *American Journal of Sociology*, 44, 1-24.
- Widgery, R. N. (1982). Satisfaction with the Quality of Urban Life: A Predictive Model. *American Journal of Community Psychology*, 10(1), 37-48.
- White, M. J. (1985). Determinants of Community Satisfaction in Middletown. *American Journal of Community Psychology*, 13(5), 583-597.
- Wolpert, J. (1965). Behavioral aspects of the decision to migrate. *Papers and Proceedings of the Regional Science Association*, 15, 159-169.
- Zehner, R. B., & Chapin, F. S. (1974). *Across the City Line*. Lexington, MA: Heath.

APPENDIX 1: Descriptive statistics for the reduced sample including control variables

Table: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Community Satisfaction	2029	1.00	5.00	3.7408	.94254
Quality of the public schools	2029	1.00	5.00	3.5993	1.14940
Quality of colleges and universities	2029	1.00	5.00	3.9261	1.09439
Cultural opportunities	2029	1.00	5.00	3.4584	1.29323
Job opportunities in your field	2029	1.00	5.00	3.2632	1.24935
Religious institutions that meet your needs	2029	1.00	5.00	4.2119	.97018
A good place to meet people and make friends	2029	1.00	5.00	3.5840	1.09799
Vibrant nightlife	2029	1.00	5.00	3.0483	1.29771
Affordable housing	2029	1.00	5.00	3.0601	1.22125
Public transportation	2029	1.00	5.00	2.6067	1.28067
Congestion	2029	1.00	5.00	3.3159	1.29185
Quality health care	2029	1.00	5.00	3.9285	1.08936
Climate	2029	1.00	5.00	3.6964	.99282
Air quality	2029	1.00	5.00	3.8167	1.06026
Beauty or physical setting	2029	1.00	5.00	4.0177	1.02228
Outdoor parks, playgrounds, and trails	2029	1.00	5.00	4.1060	1.00153
Current economic conditions	2029	1.00	5.00	3.3307	.99086
Future economic conditions	2029	1.00	3.00	1.9921	.72565
Valid N (listwise)	2029				

APPENDIX 2: Multinomial logit regression results, with or without control variables

Table a: Multinomial logit regression results with control variables – Marginal Effects (**dependent variable: rank of community satisfaction**)

How would you rate the city or area where you live on ...	$\frac{\partial \Pr (y = 1)}{\partial x}$	$\frac{\partial \Pr (y = 2)}{\partial x}$	$\frac{\partial \Pr (y = 3)}{\partial x}$	$\frac{\partial \Pr (y = 4)}{\partial x}$	$\frac{\partial \Pr (y = 5)}{\partial x}$
Quality of Public Schools	-.0003501 (-1.73)	-.0115077** (-4.74)	-.0541935** (-4.33)	.033726** (2.59)	.0323253** (4.43)
Quality of colleges and universities	.0000583 (0.84)	.0034434 (1.61)	.0221918 (1.57)	-.0104853 (-0.71)	-.0152082 (-1.89)
Cultural Opportunities	-.0000676 (-0.92)	-.0005026 (-0.23)	-.0418129** (-2.95)	.029952* (2.03)	.0124312 (1.56)
Job opportunities in your field	-.0001978 (-1.56)	-.0045007* (-2.14)	.0128312 (1.00)	.0029331 (0.22)	-.0110658 (-1.56)
Religious institutions that meet your need	-.0000348 (-0.58)	-.0017166 (-0.87)	-.0352065* (-2.50)	.0067812 (0.44)	.0301767** (3.06)
A good place to meet and make friends	-.0001595 (-1.34)	-.0097947** (-3.60)	-.0776067** (-4.97)	.0534393** (3.29)	.0341216** (3.83)
Vibrant nightlife	.0001187 (1.33)	.0002687 (0.13)	.0310615* (2.30)	-.0267447 (-1.95)	-.0047042 (-0.66)
Affordable housing	-0.000523 (-0.09)	-.0049745* (-2.52)	-.0205877 (-1.77)	.0148312 (1.26)	.0107362 (1.75)
Public Transportation	.0000606 (0.93)	.002178 (1.20)	.0220082 (1.92)	-.0186227 (-1.60)	-.0056241 (-0.94)
Conjestion	-.0000879 (-1.15)	-.0037697* (-1.99)	-.0386653** (-3.33)	.0133193 (1.11)	.0292035** (4.41)
Quality health care	-.0001776 (-1.50)	-.0033754 (-1.68)	-.0323301* (-2.44)	.0199448 (1.41)	.0159384 (1.91)
Climate	-.0000442 (-0.63)	-.0002483 (-0.11)	-.0051077 (-0.35)	-.0163084 (-1.07)	.0217086** (2.58)
Air quality	.000064 (0.82)	-.0049003* (-2.16)	-.0211254 (-1.46)	.0224429 (1.48)	.0035189 (0.41)
Beauty or physical setting	-.0002351 (-1.55)	-.0090548** (-3.49)	-.0793591** (-4.93)	.0212678 (1.23)	.0673812** (6.29)
Outdoor activity	-.0001094 (-1.24)	-.0049666* (-2.30)	-.0330151* (-2.12)	.0198118 (1.19)	.0182794 (1.78)
Current economic conditions	-.0003378 (-1.55)	-.0141754** (-4.30)	-.1172202** (-6.78)	.067129** (3.76)	.0646044** (6.65)
Future economic conditions	-.0003138 (-1.56)	-.0087257** (-2.65)	-.0469422* (-2.49)	.0411438* (2.14)	.0148378 (1.47)
Age	.0000548 (0.87)	.0009641 (0.57)	.0128768 (1.18)	-.0194762 (-1.75)	.0055805 (0.94)
Gender	-.0000651 (-0.52)	-.0052915 (-1.35)	-.0308968 (-1.24)	.0111334 (0.44)	.0251201 (1.87)
Marital Status	.0000107 (0.26)	.0007729 (0.61)	-.001227 (-0.14)	-.0086641 (-0.97)	.0091075 (1.89)
Education level	-.0000819 (-1.28)	-.0030394* (-2.04)	-.0250776** (-2.75)	.021029* (2.25)	.00717 (1.44)
Children, under age 3	.0002971 (1.24)	.0102021 (1.64)	-.0348473 (-0.68)	-.0165409 (-0.33)	.040889 (1.58)
Children, age 3-7	5.65e-06 (0.03)	.0026626 (0.55)	-.0040738 (-0.12)	.0127111 (0.36)	-.0113056 (-0.59)
Income	-.0000358 (-0.79)	-.0010227 (-0.79)	-.0144 (-1.68)	.0050528 (0.57)	.0104058* (2.19)
Own or rent	.0004085 (1.42)	.0069316 (1.13)	.0389036 (0.86)	-.0401793 (-0.84)	-.0060644 (-0.22)
How long have you lived at this residence	.0000783 (0.79)	.0014381 (0.56)	.00581 (0.35)	-.0118236 (-0.70)	.0044972 (0.49)
Urbanicity	-.0001795 (-1.32)	-.0001267 (-0.04)	.0326984 (1.62)	-.0473824* (-2.30)	.0149902 (1.39)

z-values within brackets. ** indicate significance at the 1 percent level, * at the 5 percent level.

Table b: Multinomial logit regression results without control variables – Marginal Effects (dependent variable: rank of community satisfaction)

How would you rate the city or area where you live on ...	$\frac{\partial \Pr(y = 1)}{\partial x}$	$\frac{\partial \Pr(y = 2)}{\partial x}$	$\frac{\partial \Pr(y = 3)}{\partial x}$	$\frac{\partial \Pr(y = 4)}{\partial x}$	$\frac{\partial \Pr(y = 5)}{\partial x}$
Quality of Public Schools	-.0014648** (-6.75)	-.0130858** (-12.08)	-.0562442** (-12.96)	.036753** (7.92)	.0340419** (13.14)
Quality of colleges and universities	.0002212 (1.94)	.0035288** (3.25)	.0016793 (0.33)	-.001883 (-0.34)	-.0035463 (-1.16)
Cultural Opportunities	-.0003308* (-2.55)	-.0033432** (-2.93)	-.0280735** (-5.35)	.0212435** (3.83)	.010504** (3.55)
Job opportunities in your field	-.0004578** (-3.46)	-.0035531** (-3.38)	-.0186811** (-3.96)	.0194202** (3.91)	.0032718 (1.26)
Religious institutions that meet your need	1.89e-06 (0.02)	-.0007142 (-0.70)	-.0209158** (-4.07)	-.0025465 (-0.45)	.0241746** (6.65)
A good place to meet and make friends	-.0013044** (-5.92)	-.0171692** (-12.23)	-.0720178** (-12.67)	.0498045** (8.20)	.0406869** (12.13)
Vibrant nightlife	.0003504** (2.82)	.002356* (2.12)	.0163778** (3.26)	-.0164269** (-3.15)	-.0026573 (-1.03)
Affordable housing	-.0000943 (-0.89)	-.0044803** (-4.58)	-.0120855** (-2.84)	.0145462** (3.29)	.0021138 (0.95)
Public Transportation	.0005632** (4.53)	.0026485** (2.84)	.0185719** (4.56)	-.014354** (-3.41)	-.0074295** (-3.58)
Conjestion	-.0005934** (-4.66)	-.0048595** (-5.13)	-.0385816** (-9.09)	.0174719** (3.88)	.0265625** (10.91)
Quality health care	-.0004412** (-3.59)	-.0024366* (-2.38)	-.0163454** (-3.30)	.0157147** (2.92)	.0035085 (1.13)
Climate	-.0003558** (-2.81)	-.0046194** (-4.04)	-.0176413** (-3.27)	.0027307 (0.48)	.0198859** (6.40)
Air quality	-.0002679* (-2.12)	-.0047068** (-4.10)	-.0252021** (-4.69)	.0151429** (2.64)	.015034** (4.73)
Beauty or physical setting	-.0011111** (-5.58)	-.0125913** (-9.69)	-.0697925** (-12.15)	.0310283** (4.92)	.0524665** (13.57)
Outdoor activity	-.0003675** (-2.89)	-.005281** (-4.70)	-.0232818** (-4.26)	.0078119 (1.30)	.0211184** (5.59)
Current economic conditions	-.002158** (-6.76)	-.0203081** (-12.96)	-.0847891** (-13.61)	.0516613** (7.86)	.0555939** (15.85)
Future economic conditions	-.0008756** (-4.13)	-.0088218** (-5.46)	-.035899** (-5.32)	.0360671** (5.13)	.0095292** (2.65)

z-values within brackets. ** indicate significance at the 1 percent level,* at the 5 percent level.

Table 1: Descriptive statistics for Community Characteristics

	N	Minimum	Maximum	Mean	Std. Deviation
Community Satisfaction	27883	1.00	5.00	3.7919	0.95367
Quality of the public schools	25864	1.00	5.00	3.6134	1.16157
Quality of colleges and universities	24080	1.00	5.00	4.0271	1.06522
Cultural opportunities	26627	1.00	5.00	3.5187	1.28798
Job opportunities in your field	23031	1.00	5.00	3.2566	1.26616
Religious institutions that meet your needs	23798	1.00	5.00	4.2738	.96947
A good place to meet people and make friends	27057	1.00	5.00	3.6985	1.07935
Vibrant nightlife	24270	1.00	5.00	3.1283	1.31075
Affordable housing	26875	1.00	5.00	3.0516	1.22739
Public transportation	25429	1.00	5.00	2.7204	1.30981
Congestion	27589	1.00	5.00	3.3216	1.27764
Quality health care	27197	1.00	5.00	3.9594	1.07518
Climate	27508	1.00	5.00	3.7368	.98232
Air quality	27330	1.00	5.00	3.8005	1.05466
Beauty or physical setting	27577	1.00	5.00	4.0645	1.01423
Outdoor parks, playgrounds, and trails	27360	1.00	5.00	4.1402	1.00367
Current economic conditions	27482	1.00	5.00	3.3266	.97825
Future economic conditions	27734	1.00	3.00	2.0106	.71772
Valid N (listwise)	14189				

Table 2: Results for OLS and Ordered Logit Regressions (dependent variable: rank of community satisfaction)

	OLS with control variables	OLS without control variables	Ordered logit with control variables	Ordered logit without controls
Quality of Public Schools	0.130*** (8.467)	0.132*** (22.80)	0.369*** (7.819)	0.372*** (21.55)
Quality of Colleges and universities	-0.0471*** (-2.676)	-0.0208*** (-3.011)	-0.144*** (-2.697)	-0.0529*** (-2.617)
Cultural Opportunities	0.0407** (2.309)	0.0393*** (5.662)	0.134** (2.506)	0.112*** (5.514)
Job opportunities in your field	0.0113 (0.702)	0.0327*** (5.222)	0.0118 (0.242)	0.0856*** (4.643)
Religious institutions that meet your need	0.0601*** (3.299)	0.0282*** (3.992)	0.159*** (2.908)	0.0826*** (4.027)
A good place to meet and make friends	0.132*** (6.857)	0.160*** (21.23)	0.391*** (6.631)	0.459*** (20.38)
Vibrant nightlife	-0.0395** (-2.471)	-0.0273*** (-4.286)	-0.101** (-2.068)	-0.0629*** (-3.339)
Affordable housing	0.0412*** (2.942)	0.0196*** (3.586)	0.132*** (3.131)	0.0532*** (3.289)
Public Transportation	-0.0316** (-2.298)	-0.0365*** (-7.065)	-0.0811** (-1.972)	-0.0892*** (-5.872)
Conjestion	0.0744*** (5.206)	0.0711*** (12.73)	0.236*** (5.435)	0.215*** (13.05)
Quality health care	0.0607*** (3.552)	0.0346*** (5.128)	0.160*** (3.107)	0.0796*** (4.007)
Climate	0.0322* (1.784)	0.0479*** (6.781)	0.119** (2.172)	0.155*** (7.481)
Air quality	0.0185 (1.005)	0.0436*** (6.079)	0.0718 (1.317)	0.130*** (6.203)
Beauty or physical setting	0.160*** (7.937)	0.149*** (19.08)	0.462*** (7.557)	0.413*** (17.95)
Outdoor activity	0.0655*** (3.344)	0.0585*** (7.756)	0.180*** (3.050)	0.154*** (6.997)
Current economic conditions	0.215*** (10.38)	0.200*** (25.09)	0.662*** (10.12)	0.600*** (24.85)
Future economic conditions	0.0846*** (3.619)	0.0680*** (7.653)	0.221*** (3.168)	0.173*** (6.678)
Age	-0.00641 (-0.480)		-0.00934 (-0.232)	
Gender	0.0641** (2.107)		0.171* (1.875)	
Marital Status	0.00895 (0.841)		0.0257 (0.799)	
Education level	0.0352*** (3.117)		0.103*** (3.032)	
Children, under age 3	-0.0183 (-0.320)		0.00548 (0.0322)	
Children, age 3-7	-0.0141 (-0.339)		-0.0471 (-0.383)	
Income	0.0210** (1.997)		0.0690** (2.142)	
Own or rent	-0.125** (-2.246)		-0.310* (-1.844)	
How long have you lived at this residence	-0.000352 (-0.0173)		0.00606 (0.100)	
Urbanicity	0.0156 (0.628)		0.0349 (0.471)	
Observations	2029	14189	2029	14189
R2/Pseudo R2	0.512	0.496	0.261	0.252

t-statistics/z-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 3: Ordered Logit Regression Results with Control Variables – Marginal Effects (dependent variable: rank of community satisfaction)

How would you rate the city or area where you live on ...	$\frac{\partial \Pr(y = 1)}{\partial x}$	$\frac{\partial \Pr(y = 2)}{\partial x}$	$\frac{\partial \Pr(y = 3)}{\partial x}$	$\frac{\partial \Pr(y = 4)}{\partial x}$	$\frac{\partial \Pr(y = 5)}{\partial x}$
Quality of Public Schools	-0.00118** (-4.52)	-0.00912** (-6.35)	-0.06588** (-7.58)	0.042895** (6.80)	0.03328** (7.46)
Quality of colleges and universities	0.00046* (2.42)	0.00356** (2.62)	0.02572** (2.69)	-0.01675** (-2.65)	-0.01299** (-2.68)
Cultural Opportunities	-0.00043* (-2.27)	-0.00331* (-2.45)	-0.02393* (-2.50)	0.01558* (2.47)	0.01209* (2.49)
Job opportunities in your field	-0.00004 (-0.24)	-0.00029 (-0.24)	-0.00211 (-0.24)	0.00137 (0.24)	0.00107 (0.24)
Religious institutions that meet your need	-0.00051* (-2.58)	-0.00394** (-2.82)	-0.02846** (-2.89)	0.01853** (2.85)	0.01437** (2.88)
A good place to meet and make friends	-0.00125** (-4.24)	-0.00968** (-5.70)	-0.06991** (-6.49)	0.04552** (5.98)	0.03531** (6.43)
Vibrant nightlife	0.00032 (1.94)	0.00249* (2.03)	0.01799* (2.06)	-0.01171* (-2.05)	-0.00909* (-2.06)
Affordable housing	-0.00042** (-2.74)	-0.00327** (-3.03)	-0.02359** (-3.11)	0.01536** (3.06)	0.01192** (3.10)
Public Transportation	0.00026 (1.87)	0.00201 (1.94)	0.01448* (1.97)	-0.00943 (-1.95)	-0.00732* (-1.96)
Conjestion	-0.00075** (-3.84)	-0.00584** (-4.85)	-0.04215** (-5.37)	0.02745** (5.07)	0.02129** (5.31)
Quality health care	-0.00051** (-2.72)	-0.00396** (-2.99)	-0.02859** (-3.09)	0.01861** (3.03)	0.01444** (3.08)
Climate	-0.00038* (-2.01)	-0.00293* (-2.13)	-0.02119* (-2.17)	0.01379* (2.15)	0.01070* (2.17)
Air quality	-0.0002 (-1.28)	-0.00178 (-1.31)	-0.01283 (-1.31)	0.00835 (1.31)	0.00648 (1.31)
Beauty or physical setting	-0.00147** (-4.50)	-0.01144** (-6.27)	-0.08260** (-7.35)	0.05378** (6.68)	0.04173** (7.19)
Outdoor activity	-0.00057** (-2.69)	-0.00444** (-2.95)	-0.03208** (-3.03)	0.02089** (2.98)	0.01620** (3.02)
Current economic conditions	-0.00211** (-4.82)	-0.01638** (-7.44)	-0.11830** (-9.65)	0.07703** (8.18)	0.05976** (9.41)
Future economic conditions	-0.00071** (-2.75)	-0.00547** (-3.05)	-0.03950** (-3.15)	0.02572** (3.09)	0.01995** (3.15)
Age	0.00003 (0.23)	0.00023 (0.23)	0.00167 (0.23)	-0.00109 (-0.23)	-0.00084 (-0.23)
Gender	-0.00055 (-1.77)	-0.00423 (-1.85)	-0.03054 (-1.87)	0.01989 (1.86)	0.01543 (1.87)
Marital Status	-0.00008 (-0.79)	-0.00064 (-0.80)	-0.00460 (-0.80)	0.00299 (0.80)	0.00232 (0.80)
Education level	-0.00033** (-2.67)	-0.00254** (-2.93)	-0.01835** (-3.02)	0.01195** (2.96)	0.00927** (3.01)
Children, under age 3	-0.00002 (-0.03)	-0.00014 (-0.03)	-0.00098 (-0.03)	0.00064 (0.03)	0.00049 (0.03)
Children, age 3-7	0.00015 (0.38)	0.00117 (0.38)	0.00842 (0.38)	-0.00548 (-0.38)	-0.00425 (-0.38)
Income	-0.00022* (-1.99)	-0.00171* (-2.10)	-0.01233* (-2.14)	0.00803* (2.12)	0.00623* (2.13)
Own or rent	0.00099 (1.76)	0.00766 (1.82)	0.05535 (1.84)	-0.03604 (-1.83)	-0.02796 (-1.84)
How long have you lived at this residence	-0.00002 (-0.10)	-0.00015 (-0.10)	-0.00108 (-0.10)	0.0007 (0.10)	0.00055 (0.10)
Urbanicity	-0.00011 (-0.47)	-0.00086 (-0.47)	-0.00624 (-0.47)	0.00406 (0.47)	0.00315 (0.47)

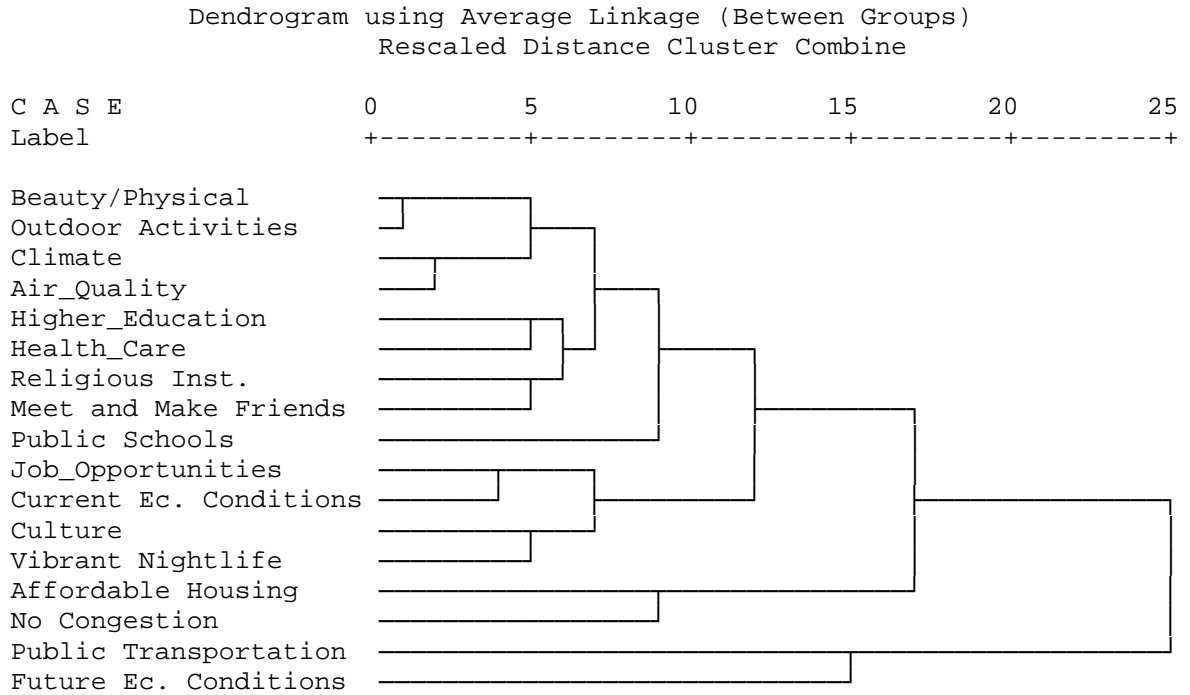
z-values within brackets. ** indicate significance at the 1 percent level,* at the 5 percent level.

Table 4: Ordered Logit Regression Results without Control Variables – Marginal Effects (dependent variable: rank of community satisfaction)

How would you rate the city or area where you live on ...	$\frac{\partial \Pr(y = 1)}{\partial x}$	$\frac{\partial \Pr(y = 2)}{\partial x}$	$\frac{\partial \Pr(y = 3)}{\partial x}$	$\frac{\partial \Pr(y = 4)}{\partial x}$	$\frac{\partial \Pr(y = 5)}{\partial x}$
Quality of Public Schools	-0.00164** (-13.01)	-0.00998** (-17.58)	-0.06400** (-20.82)	0.04180** (18.48)	0.03383** (20.49)
Quality of colleges and universities	0.00023** (2.58)	0.00142** (2.61)	0.00910** (2.61)	-0.00594** (-2.61)	-0.00481** (-2.62)
Cultural Opportunities	-0.00050** (-5.22)	-0.00301** (-5.42)	-0.01928** (-5.50)	0.01259** (5.45)	0.01019** (5.49)
Job opportunities in your field	-0.00038** (-4.46)	-0.00230** (-4.59)	-0.01472** (-4.63)	0.0096** (4.60)	0.00778** (4.63)
Religious institutions that meet your need	-0.00037** (-3.92)	-0.00221** (-4.00)	-0.01420** (-4.02)	0.00927** (4.01)	0.00750** (4.02)
A good place to meet and make friends	-0.0020** (-12.70)	-0.01230** (-16.94)	-0.0788** (-19.75)	0.05149** (17.67)	0.04167** (19.55)
Vibrant nightlife	0.00028** (3.27)	0.00169** (3.32)	0.01082** (3.34)	-0.0071** (-3.32)	-0.00572** (-3.34)
Affordable housing	-0.00024** (-3.23)	-0.00143** (-3.27)	-0.00915** (-3.29)	0.00598** (3.27)	0.00484** (3.28)
Public Transportation	0.00039** (5.55)	0.00239** (5.76)	0.01533** (5.85)	-0.01002** (-5.79)	-0.00811** (-5.85)
Conjestion	-0.00096** (-10.12)	-0.00577** (-11.98)	-0.03701** (-12.92)	0.02417** (12.32)	0.01956** (12.79)
Quality health care	-0.00035** (-3.90)	-0.00213** (-3.97)	-0.01368** (-4.00)	0.00893** (3.98)	0.00723** (4.00)
Climate	-0.00069** (-6.79)	-0.00416** (-7.26)	-0.02668** (-7.45)	0.01743** (7.34)	0.01410** (7.43)
Air quality	-0.00057** (-5.79)	-0.00348** (-6.08)	-0.02231** (-6.19)	0.01457** (6.12)	0.01179** (6.17)
Beauty or physical setting	-0.00182** (-12.18)	-0.01106** (-15.51)	-0.07095** (-17.48)	0.04634** (16.06)	0.03750** (17.28)
Outdoor activity	-0.00068** (-6.47)	-0.00413** (-6.83)	-0.02648** (-6.96)	0.01729** (6.86)	0.01399** (6.96)
Current economic conditions	-0.00265** (-13.56)	-0.01609** (-19.07)	-0.10321** (-23.82)	0.06741** (20.43)	0.05455** (23.29)
Future economic conditions	-0.00077** (-6.18)	-0.00465** (-6.54)	-0.02981** (-6.65)	0.01947** (6.56)	0.01575** (6.65)

z-values within brackets. ** indicate significance at the 1 percent level,* at the 5 percent level.

Figure 1: Clusters of Perceived Qualities in Communities



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We thank Jason Rentfrow, Thomas Holgersson, David Wilson and Glen Whyte for helpful comments and suggestions and Scott Pennington for research assistance. We also thank the Gallup Organization for access to the data.

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