American Journal of Community Psychology, Vol. 10, No. 1, 1982

Satisfaction with the Quality of Urban Life: A Predictive Model[1]

Robin N. Widgery[2]
General Motors Institute, Flint, Michigan

This paper explains a predictive model developed by using multiple linear regression techniques: 38 factors were regressed against two dependent variables, satisfaction with (a) the quality of life in the Flint area, and (b) the quality of life in the neighborhood. The 38 independent factors used in the modeling represented various social and psychological aspects of community life. Among the major predictors of community-wide satisfaction were Trust in Government and Political System, satisfaction with Family and Friends, Aesthetic Quality of the Community, and Age and Years in Community, and Optimism about the Community. Important predictors of satisfaction with neighborhood quality were satisfaction with Neighbors, Home, and Aesthetic Quality of the Community.

In order to save or restore any kind of major human system, decision- and policy-makers need appropriate and reliable information about conditions within the system. They also need to possess an awareness of the relationship existing among the multitude of components constituting that system. Relative to American cities today, neither adequate data nor knowledge of relationship exists. What is needed is a general systems model which explains the economic, political, social, psychological, and environmental factors that make cities what they are.

This is a tremendously tall order, but one that should gain support from every student of urban systems. To tackle the whole challenge laid out above is not the scope of this study. The purpose is to explore a little-

[1]The author wishes to thank the Charles Stewart Mott Foundation for funding this research.
[2]All correspondence should be addressed to Robin N. Widgery, Industrial Administration Department, General Motors Institute, 1700 West Third Avenue, Flint, Michigan 48502.

0091-0562/82/0200-0037$03.00/0

studied but extremely important aspect of an urban system—the modeling of the social psychology of city living. More specifically the author's purpose is to explore the degree to which people living in one community (Flint, Michigan) experience satisfaction with the quality of life in their neighborhoods and in the city in general. The objective is to investigate, via mathematical modeling techniques, the major social and psychological predictors of citizen satisfaction with the quality of life.

Speaking of the need to develop sound theory in the defining of quality of life indicators, Bunge (1975) noted that they are "best justified when incorporated into a theory, e.g., a mathematical model." The author hopes to accomplish something useful in this direction by developing predictive models of community and neighborhood life quality.

In the last 10 years there has been much research into the "quality of life" concept. Two branches of investigation have emerged: one emphasizing the physical and psychological well-being of citizens (Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1976; Bharadwaj & Wilkening, 1977; Zautra, Beier, & Cappel, 1977), the other branch concerned with analyzing specific conditions within various communities (Liu, 1976; Todd, 1977; Widgery, 1978; Harris, 1978). The former studies have investigated a more global arena. They have been especially concerned with exploring the variables contributing to personal happiness and contentment. The latter studies have examined urban systems with the purpose of aiding the development of urban policy and of directing resources to urban needs.

Among those studies assessing the quality of community life, especially Liu (1976) and Todd (1977), the investigators have emphasized objective measures to infer quality of life. In other words they have employed quantitative variables such as environmental conditions, proportion of minority population, delivery of welfare assistance, etc., to determine quality. The study by Widgery (1978), while concerned with urban conditions, chose to use subjective measures, i.e., citizen satisfaction, trust, optimism, etc., to infer life quality.

This study, based on the Widgery (1978) data, assumes that a better method to assess the quality of life is by measuring the amount of satisfaction people derive from living in their community. Moreover, it is believed that such an indicator of community life quality will be found to be dependent upon other variables within the subjective domain.

METHOD

During the fall of 1977 and winter of 1978, 6,917 adults were selected at random for in-depth interviews. Most of these interviews were conducted

by telephone, lasting an average of 45 minutes. About 250 interviews were conducted in-home in those neighborhoods having a relatively high percentage of residents without phones. In the city of Flint, 3,719 interviews were conducted, approximately 100 from each of 37 defined neighborhoods. These city interviews provided the data base for the analysis presented in this paper.

The representativeness of the city and suburban/out-county samples may be examined by comparing the study data with population estimates provided by a local county governmental research unit. These two sets of data, shown in Table I, indicate consistency for sex and race proportions.

Questionnaire

There were more than 200 items in the questionnaire. These were designed to measure several important social and psychological dimensions of community life. These included:

1. *Citizen satisfaction* with 57 aspects of community life.
2. Degree of *Citizen knowledge* of the community.
3. *Optimism* about the future of the neighborhood and community at large.
4. *Perceived power* of citizens to influence community institutions.
5. *Citizen motivation* (desire) to help solve neighborhood problems.
6. *Citizen commitment* to the community (strength of desire to stay in the Flint area).
7. Degree of *citizen activity* in the neighborhood and in the community at large.

Table I. Comparisons of Population Estimates Based on Local Government and Project Research

Population	Government estimates	Project estimates	Differences
City of Flint			
Non-whites	33.1	33.9	.8
Whites	66.9	66.1	
Males	43.4	44.4	1.0
Females	56.6	55.6	
Suburbs/Out-county			
Non-whites	3.2	4.7	1.5
Whites	96.8	95.3	
Males	47.3	48.7	1.4
Females	52.7	51.3	

8. Degree of *citizen affiliation and membership* in local organizations.
9. Amount of *citizen support* for various civic institutions.
10. Amount of *citizen trust and confidence* in community institutions.
11. *Citizen opinions* regarding life in the neighborhood and community at large.
12. Identification of *neighborhood and community-wide problems.*
13. *Demographic data,* e.g., sex, age, race, income, etc.

Analysis

In order to define the underlying structure of the 240-item questionnaire, factor analysis was performed using the varimax method with orthogonal rotation. In all, 40 factors were identified (see Table II): 22 are various Satisfaction scores 3 are for Trust in various institutions serving the community—government/political, business, and information (media). Other factors defined various citizen opinions and behaviors.

Multiple linear regression analyses (stepwise program) were employed using two dependent variables: (a) overall satisfaction with the

Table II. Factors Defined by Factor Analysis

Trust	Satisfaction
Government and political system	Aesthetics
Business system	Communication systems (media)
Information system (media)	Recreation and entertainment
	Neighbors
Demographics	Sense of security
Dwelling	Economic conditions
Longevity	Government and community leadership
Income level	Home
Shift	Family/friends
Number of children	Government and community services
Race	Educational system
Sex	Climate
Employment status	Race relations
	Trees
Opinions	Employment
Optimism	Transportation
Potency	Safety services
Support	Traffic and streets
Desire to move	Hospitals
	Medical services
Behavior	Neighborhood[a]
Affiliation/membership	Flint area[a]
Activity	
Motivation	

[a] Indices major dependent variables.

quality of life in the neighborhood, and (b) overall satisfaction with the quality of life in the Flint area. All 38 other factors were regressed as independent variables. Each individual sample score for each factor was transformed for the regression analysis by multiplying it by the scores loading within the factor, thereby representing its weighting within the factor. In addition to using multiple linear regression analyses for the total city sample, analyses were made by race, age, and sex.

RESULTS

The two critical dependent variables in this study are overall citizen satisfaction with the quality of life in (a) the Flint area, and (b) the neighborhood. In Tables III and IV, the best predictors of the dependent variables resulting from the multiple linear regression analyses are displayed. All reported predictor variables are significant at the .05 level, using the critical value of t as the determinant.

Predictors of Satisfaction with the Flint Area

Using the proportion of variance accounted for (R^2), five independent variables are the most important predictors of satisfaction with the Flint area: Trust in Government and Political System, and Satisfaction with Family and Friends, and with Aesthetics (attractiveness), Age and Years in the Community, and degree of Optimism. Less important (but statistically significant) predictors are satisfaction with Climate, Race Relations, and Degree of Affiliation and Membership (see Table III).

By Race. Some interesting differences emerge when blacks and whites are analyzed separately. While the highest predictor of community-wide satisfaction for blacks is Trust in Local Government and Political System, the best predictor for whites is satisfaction with Local Government and Leadership. Neither of these variables is a significant predictor for the other group. Moreover, Trust in the Business System is important among whites, but not among blacks. While satisfaction with Neighbors and Race Relations are significant for whites, satisfaction with Home and Degree of Affliliation and Membership are important among blacks.

By Age. Young adults differ from older citizens in that Satisfaction with Race Relations and Trust in Local Government and Political System are not important predictors of overall satisfaction with city life. Unlike the older groups Trust in Business and satisfaction with Employment are important predictors among the young. The middle and older groups differ in that satisfaction with Educational System is important for the middle-aged, and satisfaction with the Communication System is a significant

Table III. Best Predictors of Overall Satisfaction with the Quality of Community Life

Predictors	Total (R^2)	Race (R^2)		Age (R^2)			Sex (R^2)	
		White (n = 2,338)	Black (n = 1,381)	18-34 (n = 1,170)	35-54 (n = 1,181)	55+ (n = 1,368)	Male (n = 1,023)	Female (n = 2,696)
Trust in local government and political system	.133		.146		.112	.145		.067
Satisfaction with family and friends	.062	.016	.061	.072	.052	.032		.042
Satisfaction with aesthetics	.043	.011	.045	.134	.048		.058	.010
Age and years in community	.037	.020	.018					.033
Optimism about community	.032	.049	.017	.061	.036	.028	.022	.033
Satisfaction with climate	.019	.023	.021	.011	.024	.022	.014	.020
Degree of affiliation and membership	.014		.032	.013	.012	.017	.037	.010
Satisfaction with race relations	.011	.017			.010	.076	.012	.010
Trust in the business system		.060		.035			.048	
Satisfaction with								
Neighbors		.037					.010	
Local government and community leadership		.126					.161	
Home			.011				.010	
Educational system					.014			
Communication system						.013	.010	
Employment				.015				
Recreation and entertainment							.019	
Government and community services								.116
Support for Millage Increase								.016
Total variance accounted for (R^2)	.35	.36	.35	.34	.31	.33	.40	.35

[a] Total city of Flint sample (n = 3,719).

Table IV. Best Predictors of Satisfaction with the Quality of Neighborhood Life

Predictors	Total (R^2)[a]	Race (R^2)		Age (R^2)			Sex (R^2)	
		White (n = 2,338)	Black (n = 1,381)	18-34 (n = 1,170)	35-54 (n = 1,181)	55+ (n = 1,368)	Male (n = 1,023)	Female (n = 2,696)
Satisfaction with								
Neighbors	.185	.234	.052	.110	.088	.215	.081	.101
Home	.098	.029	.211	.193	.059	.056	.052	.179
Aesthetics	.056	.036	.096	.067	.037	.030	.037	.053
Government and community services	.029		.030	.012	.171	.017	.153	.023
Neighborhood security	.017	.076		.023	.018	.084	.022	.013
Support for millage increase			.013				.017	.011
Employment status (employed or unemployed)				.017				
Total variance accounted for (R^2)	.39	.39	.39	.42	.37	.40	.36	.38

[a] Total city of Flint sample (n = 3,719).

predictor for the older group. Satisfaction with Aesthetics is not a predictor for older citizens, but it is important to both the young and middle-aged.

By Sex. The major predictors for both sexes are importantly centered on perceptions of the role of local government, satisfaction with Local Government and Community Leadership (.161) for males and satisfaction with Government and Community Services (.116) for females. The second most potent predictor for females is also an evaluation of local government, Trust in the Government and Political System (.067). Trust in the Business System (.048) is a more important determinant for males. Aesthetic Environment is much more important for males (.058) than for females (.010). Other predictors such as Optimism and Satisfaction with Climate are fairly similar for the two groups. Some of the other predictors are unique to each group: Family and Friends, Support for Millage Increase, and Age and Years in Community for females and Recreation and Entertainment, Race Relations, Communication Systems, and Neighbors for males.

Predictors of Satisfaction with Neighborhoods

When examining the total city sample, five significant independent variables emerge as significant predictors of satisfaction with neighborhood: satisfaction with Neighbors, Home, Aesthetics, Government and Community Services, and Neighborhood Security. These five account for nearly 40% of the total variance (see Table IV).

By Race. The most obvious difference between black and white predictors is the magnitude of R^2 for the lead predictor for each group. High for whites is satisfaction with Neighbors (.234); high for blacks is satisfaction with Home (.211). A more important predictor for whites is Satisfaction with Neighborhood Security, while to blacks Satisfaction with Government and Community Services is more important. Moreover, there is a significant relationship between neighborhood satisfaction and Support for Millage Increase among blacks.

By Age. It is interesting to note in Table IV the difference in the leading predictor for each of the three age groups: Home for the young (.193), Government and Community Services for the middle group (.171), and Neighbors for the older citizens (.215). Among the younger group Employment Status is significant. Finally, it is also interesting to note the higher R^2 (.084) for Neighborhood Security among older citizens than for the young and middle-aged.

By Sex. While the same predictors were selected for both sexes there is one marked difference in their hierarchy. Note that Home is the leading determinant for females (.179); it is Government and Community Services (.153) for males.

DISCUSSION

When doing correlational research such as described above, it is essential to remind the reader that while causality between independent (predictor) variables and dependent variables may be "assumed," causality is *not* proven nor even supported scientifically. However, assumptions of causality may be made by researcher when testing theory using correlational techniques. In the case of providing policy-makers with correlational data (predictors of various dependent variables as is the purpose here), the data should be interpreted as suggestive of types of relationships—some probably causal, some coincidental, some neither.

Of some concern to the researchers was the relatively low total variance accounted for (R^2) in the multiple linear regression analyses: .35 for Overall Satisfaction with the Flint Area, and .39 for Satisfaction with the Neighborhood. This total predictive value is a bit higher however than that reported by Marans (1979). Using evaluative, perceptual, and demographic information in predicting neighborhood satisfaction, he reported an R^2 of .36. To gain a better understanding of why our own R^2 was relatively low, scatterplots were run for both dependent factors against each independent factor. Several scatters indicated significant curvilinear relationships existing between the dependent and independent factors. Since multiple regression analysis assumes linearity among factors, it is likely that much unaccounted for variance is hidden in some of these nonlinear relationships. Moreover, it is reasonable to assume that there were many variables that were *not* measured in the survey that could account for still more of the variance.

Community Satisfaction

Of particular curiosity is the difference between major predictors of community-wide satisfaction for blacks and whites (Table III). The most important predictor for blacks is Trust in Local Government (.146). For whites it is satisfaction with Local Government (.126). At first glance one would suspect that there may be a strong degree of multicollinearity between these two factors. However, since each was derived by an orthogonal factor analytic format, we must assume that they are independent of each other.

These results indicate that trust (or distrust) between blacks and City Hall importantly influences black satisfaction toward the community-at-large. Trust in the city fathers, however, does not appear to be a part of the white equation. Mediating this effect may be the fact that Flint is a white city (66%) with a white-dominated government. This fact may accentuate the role of trust as a bridge between the black and white communities.

The climate of trust regulates the thermometer of community satisfaction for blacks.

Analysis by age groups also showed some interesting discrepancies. For instance, the major predictor of community-wide satisfaction for the youngest group (18-34 years) is Aesthetic Environment (.134). The R^2 drops to .048 for 35- to 54-year-olds and drops from significance for the senior group. This is not too surprising since the actual scores for the Aesthetic environment are higher the longer people live in the Flint area. Perhaps older citizens have allowed their increased ego involvement with the community to "tint" their perception of the city's aesthetic quality. Moreover, as a citizen's aesthetic evaluations improve, this dimension may no longer interact with community-wide evaluations. In other words an ugly city may suppress satisfaction with the quality of city life, but a beautiful one may not contribute as much to increased satisfaction. A more ominous explanation may be that ugliness creates enough dissonance among the young to motivate many of them to exit from the community. Those who stay may be individuals who are less sensitive to this dimension. The author suspects that both of these explanations are reasonable.

Among the middle and older age groups Trust in Local Government is the primary predictor of community-wide satisfaction. The young group had no significant R^2 for this factor. A plausible reason may be that young people are less likely to be property taxpayers—having less stake in the policy output and performance of City Hall. Older groups are more likely to be property owners and thus watch local government more critically.

The centrality of feelings toward local government is most noticeable for both sexes. However, the strongest male predictor is satisfaction with Government and Community Leadership (.161) while it is satisfaction with Government and Community Services (.116) and Trust in Government and Political System (.067) for females. Perhaps females, who are more likely to be homemakers and close to the receiving end of community services in the neighborhood (garbage collection, security, etc.), are more likely to evaluate the community-at-large based on perceptions of government services provided in ways that meet the needs of the home. Perhaps male contact with government is at a more abstract and remote level. Their perceptions of government competency may be filtered through the media and its reports of actions and decisions made by government leaders. Images projected in this manner may create positive or negative associative links between the evaluations of leaders and feelings about the community-at-large.

There is a strong youth (18 to 34 years) bias in the male sample (in Flint there are an inordinately high proportion of widows). This youth bias may explain the relatively high predictive value (.058) for Aesthetic

Environment among males. This factor was the leading determinent among the young group. Moreover, females (especially widows) are more likely to spend more time in their homes than are males—thus being less aware of the aesthetic quality of the community environment.

Neighborhood Satisfaction

Most noticeably, satisfaction with Neighbors and Home are the most potent determinants of neighborhood satisfaction. In the case of blacks, young adults, and females, Home is by far the leading indicator. It is important to note that each of these groups has a lower satisfaction rating than their comparison groups. These difference scores are statistically significant in the case of *race* and *age,* but not for *sex.*

Satisfaction with Neighborhood Security is another example of marked differences in predictive value. Whites and older citizens have considerably higher R^2 than comparable groups. In both of these groups Neighborhood Security scores are considerably lower than the scores for other neighborhood attitude objects.

The above examples of difference in R^2 for the various comparison groups suggest the operation of a deprivation effect. Factors which are less satisfied, if of comparable salience with other factors, may become more potent predictors of the dependent variable than the better-satisfied factors. Of course, it is also likely that satisfaction itself determines the relative salience of the factor. Moreover, if all indpendent factors are equally satisfied, salience may determine the hierarchy of predictive potency.

CONCLUSION

Providing usable information to urban policy-makers has been of concern to the author. A far greater problem is to insure that such information is presented in a simplified format and then used. Too often, however, local politicians make decisions based on philosophy, campaign promises, or reactions to the most vocal or strongest pressure group—without sufficient study of the most pertinent information on the issue.

In this paper, I have developed a mathematical model using multiple linear regression techniques to show urban planners and decision-makers one way to better understand the relationships existing between citizen satisfaction with the community and several other psychological, social, and environmental dimensions. Although it is difficult to encourage urban decision-makers to decide policy based on coefficients or other indicators

of relationship, it is hoped that they will learn to use such data in order to gain a better intuitive grasp of the dynamics of the human experience in the community. Such usage should heighten their sensitivity to the constituency, and it should give them a better feeling for the likely outcomes resulting from their decisions.

REFERENCES

Andrews, F., & Withey, S. B. *Social indicators of well being: American's perceptions of life quality.* New York: Plenum Press, 1976.

Bharadwaj, L., & Wilkening, E. A. The prediction of perceived well-being. *Social Indicators Research,* 1977, *4,* 421-439.

Bunge, M. What is a quality of life indicator? *Social Indicators Research,* 1975, *2,* 65-79.

Campbell, A. Converse, P., & Rodgers, W. *The quality of American life: Perceptions, evaluations and satisfactions.* New York: Russell Sage Foundation, 1976.

Harris, L. *The 1978 HUD survey on the quality of community life: A data book.* Washington, D.C.: U.S. Department of Housing and Urban Development, Office of Policy Development and Research, Division of Policy Studies, 1978.

Liu, B. *Quality of life indicators in U.S. metropolitan areas: A statistical analysis.* New York: Praeger Publishers, 1976.

Marans, R. *The determinants of neighborhood quality.* U.S. Department of Housing and Urban Development, Office of Policy Development and Research, Annual Housing Survey Studies, No. 3, 1979.

Todd, R. H. A city index: Measurement of a city's attractiveness. *Review of Applied Urban Research,* 1977, *5.*

Widgery, R. *The Greater Flint area neighborhood quality of life report.* Flint: Charles Stewart Mott Foundation, 1978.

Zautra, A., Beier, E., & Cappel, L. The dimensions of life quality in a community. *American Journal of Community Psychology,* 1977, *5,* 85-97.