

4. THE QUALITY OF LIFE IN LARGE AMERICAN
CITIES: OBJECTIVE AND SUBJECTIVE
SOCIAL INDICATORS

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ABSTRACT. The concept of 'quality of life' as a tool of comparative social indicators research is analyzed. Inter-city comparisons of objective and subjective measures of well being are presented and the distinctiveness of these two dimensions of the quality of life is documented. The paper concludes with some observations on the implications that this distinctiveness has for the use of the concept 'quality of life' in future social indicators research.

One of the most important characteristics of social indicators is their ability to allow more detailed evaluation of social conditions than previously possible. Social indicators can provide scientifically accurate descriptions of the state of social entities. However, their major innovation in such descriptions has come not with their added accuracy but rather with their concern for evaluating the 'quality of life' of different communities. This use of social indicators to describe quality of life is a direct outgrowth of the normative connotations social indicators carry. In the overwhelming majority of social indicators research reports normative direction is assigned to each indicator employed, i.e., it is stated that the more of a measured condition the better (or vice-versa). Indeed, it has been argued that these normative implications are part of the very definition of social indicators (U.S. HEW, 1969:97).

This normative dimension of social indicators adds further depth to the types of description that can be presented. Not only can existing conditions and changes in these conditions be detailed, but normative statements can be made stating whether the conditions of life in society have improved or worsened, or, in other words, whether "things have gotten better, or people are 'better off'" (U.S. HEW, 1969:97).

Attempts to analyze quality of life have led to the development of essentially two major categories of social indicators. The first, and perhaps most commonly employed type of indicator, has sought to evaluate societal well being by utilizing objective measures of community con-

ditions. Heavy reliance is placed on Census data and other governmental reports to assess the quality of life available to individuals in a given community. Measures of societal conditions in such areas as housing, health, and income are employed to describe the quality of life. Postulating 'consensus' that such conditions are inherent to the definition of the good life and that the direction of change in these conditions can be normatively evaluated (e.g., that higher income is better than lower income), comparisons of the quality of life of communities are made using these objective social indicators (see, for example, Sheldon and Moore, 1968; Flax, 1972; Smith, 1973). Conceptually, 'quality of life' becomes a function of the objective conditions of the community in which one lives.

On one level the equating of objective conditions and the quality of life is of course true. If we agree that less infant mortality, less substandard housing, less unemployment, etc. are desirable objective social conditions, are normatively 'good' for people to experience, and are part of the definition of the quality of life, then the distribution of these objective conditions across groups, between geographic units, or over time can be examined and comparisons made indicating improvement or retrogression in the quality of life *as measured by these specified and observed social conditions*. As long as the analysis of the quality of life using objective data is kept on this level there would appear to be no real problem. However, there is a strong tendency to use these specific social indicators data to generalize to more global quality of life statements and to equate the observed patterns in objectively measured conditions with actual differences in the life experiences of people.

The nature of problems caused by this tendency can best be seen in the broadness of the terms 'social well being' and 'quality of life' that are used in social indicators research. Comparisons of welfare between groups of people are being made based on the generated objective social indicators data. Yet it is arguable that actual individual welfare and the quality of life actually experienced by people is a much more highly subjective condition than implied by the social indicators research based on the objective data most frequently employed. It is certainly possible that individuals or social groups may be exposed to objectively better conditions of health care, environment, employment, etc. than other individuals or groups but subjectively feel that the quality of their

personal life experiences are no better. Despite the often found assumption that objective social indicators data actually reflect the quality of life experienced by people, we have no reason to *a priori* assume that such a correlation exists. The connections between the 'quality of life' as measured by objective social indicators and the 'quality of life' subjectively experienced by people is really open to question (Campbell and Converse, 1972:9, *passim*).

This obvious point has led to the development of the second major class of quality of life measures – 'subjective social indicators'. This type of indicator is based not on the normative evaluation of objective social conditions but on survey research reports about life experiences and subjective evaluations of life conditions made by individuals. Subjective social indicators seek to *directly* tap the quality of life as experienced by people rather than imply a connection between objective social conditions and personal well being. And, as argued above, despite the implications of much of the work on objective social indicators, there is no *a priori* reason to believe that these two sets of conditions, i.e., objective life situations and subjective feelings of life quality, vary together. Yet the assumption of such correlations is intuitively appealing and has frequently been made. This in turn has led to confusion in the concept 'quality of life' as a tool of comparative research as well as a blurring of the distinction between the physical and psychological aspects of life quality. These ambiguities have produced a need to examine the extent (if any) of the intercorrelations between objective and subjective social indicators – a need that has been recognized by several researchers. For example, Stagner (1970) argues that:

objective indices are limited; inherent factors in (social) situations demand that subjective data ... be considered. A set of psychological indicators would focus on the frequency and intensity of satisfaction (or dissatisfaction) with aspects of (life).... Effective use of these indicators will require that they be analyzed in relation to the objective (social indicators) data. (p. 59)

Andrews and Withey concur. They write:

Only when both (indicators of objective and subjective conditions) are concurrently measured will it be possible to know how demonstrable changes in living conditions are affecting people's sense of life quality, and -conversely- whether changes in people's sense of life quality can be attributed to changes in life conditions. (1973:2)

Smith (1973) similarly believes that attitudinal measures of life quality

should be analyzed and compared to the patterns suggested by objective social indicators (p. 137). It would be at this juncture that social indicators could have their most significant impact on policy. If a set of objective conditions and indicators of those conditions could be identified that are strongly related to feelings of subjective life satisfaction, the significance of that finding for both policy makers as well as scholars is obvious.

The remainder of this paper will be an examination of this question of inter-correlations between the two types of social indicators we have identified.

I. DATA SOURCES

We have argued that social indicators are generally classifiable into two broad categories. The first type discussed, 'objective social indicators', are used to measure in a normative fashion the objective conditions of social aggregates. These measured conditions are not necessarily reflected in the life experiences of individuals (although that assumption is often found in social indicators research). The second type of social indicator, 'subjective social indicators', is based on direct reports of personal life experiences and life characteristics, and attempts to measure personal assessments of life quality. It was further suggested above that the extent to which objective and subjective 'quality of life' measures vary together was a question of both theoretical and, given the nature and meaning of social indicators, of practical importance. Fortunately, this correlation can be assessed empirically and the theoretical questions raised concerning the extent and nature of the inter-relationships investigated. The method used herein to accomplish this relies on the measurement of the degree to which variations in measured objective life conditions in fifteen of the largest cities in the United States correspond with variations in the level of subjective life satisfaction found in these same cities.¹

The objective life conditions found in thirteen of these cities has been examined by the Urban Institute (Flax, 1972). In most instances, data from the U.S. Census and from other governmental agency reports are available to supplement the Urban Institute's work and provide data for the other two cities not previously analyzed. Measures of subjective life quality in these same cities are obtainable through reinterpretation of data included in the 1968 inter-city survey conducted by Campbell and Schuman for the National Advisory Commission on Civil Disorders.

Not only does the analysis of this data provide the opportunity to assess the question of the inter-correlation between the conditions measured by the two types of social indicators, but also taps in a direct fashion the need for inter-areal comparisons that is one of the major themes of current social indicators research (see, e.g., Gastil, 1970; Smith, 1973). It must be noted that the choice of indicators of both types is highly constrained by the availability of data. There is, however, considerable justification for the indicators chosen – justification that will be developed as this paper progresses.

II. SUBJECTIVE SOCIAL INDICATORS

While there is at this time no overwhelming consensus on actual measures of subjective life quality, there is a fairly widespread agreement that subjective life quality is related to such aspects of personal life as aspirations, expectations, happiness, and satisfaction. Moreover, recent research has tended to focus on satisfaction as the most useful indicator of subjective life quality (Stagner, 1970; Campbell *et al.*, 1972; Rossi, 1972; Campbell, 1972; Andrews and Withey, 1973).

Given this, Andrews and Withey have probably progressed the furthest in the development of measures of subjective life quality. In their analysis, Andrews and Withey imply that subjective social indicators research should be concerned with measures of overall ('global') life satisfaction as well as measures of satisfaction with more specific aspects ('domains') of life. Further, they identify the domains that seem to be most important in structuring overall life satisfaction. They find that more than half of the variation in individual evaluations of general life satisfaction can be explained by an additive combination of affective responses across several specific life domains. These domains include the level of satisfaction with one's housing, one's family life, one's job, and one's income. In addition to the level of satisfaction with these specific aspects of life, feelings of personal efficacy, satisfaction with government operations, and satisfaction with the level of available services are also crucial to feelings of general life satisfaction (Andrews and Withey, 1973: Exhibits 7-11).

Comparisons of subjective life quality can be made using both the single summary measure of 'global' life satisfaction and those specific domains identified as important. In particular, given the concern for

inter-areal analysis, comparisons of geographically defined social units using these measures would be particularly useful in analyzing subjective quality of life.

Measures of individual feelings across most the important life domains do exist in the attitudinal data gathered by Campbell and Schuman. This makes possible an analysis of city by city variation in subjective life experiences and life satisfaction with these specific conditions. Moreover, while an actual measure of global life satisfaction does not appear in the fifteen city survey, a general measure can be constructed by combining individual responses across the more specific measures that are available. The resulting 'standardized additive score' will hopefully approximate responses one would obtain from an actual measure of total perceived life quality.² Thus the survey data does provide a wide range of measures of subjective life satisfaction for fifteen cities.

Given this data, the first question to be asked is whether or not city residence has any impact at all on responses to these subjective social indicators, i.e., does it make sense to think of and investigate the differences between cities in the level of subjective life quality found among their residents. The amount of variance explained by city residence for blacks and whites separately across the subjective social indicators used in this study is reported in Table I. As can be seen, city residence has a small, but fairly constant, statistically significant effect on individual

TABLE I
Variance explained (omega, squared) in subjective quality of life measures
by city residence (Fifteen cities)

Measure	White sample	Black sample
Satisfaction with Job	n.s. ^a	n.s.
Satisfaction with Home	1.8%	2.4%
Satisfaction with Money and Income	n.s.	3.4
Personal Efficacy	1.2	n.s.
Satisfaction with Level of Services	6.8	3.9
Citizen Competence	2.4	3.4
Government Distrust	3.2	11.5
Constructed Measure of Total Life Satisfaction	3.1	6.7

^a n.s.: not significant at 0.05 level

feelings of life satisfaction across most of the specific measured life domains. While in general, city residence is more important in explaining the feelings of blacks than whites (especially with regard to feelings of government distrust), for neither race is city residence an especially strong determinant of subjective life satisfaction. This can also be seen by the fact that city residence explains only 6.7% of the variation in general life satisfaction of black respondents and only 3.1% of the variation in the general level of satisfaction of whites. It is apparent that cities are not characterized by large differences in the level of subjective life quality found among their citizens.

We do know, however, that these same cities are in fact characterized by large differences in the objective conditions found within their borders. For example, as measured by robbery rates, Milwaukee was about 20 times safer in 1970 than was Washington, D.C. Moreover, the robbery rate in Washington was increasing at twice the speed of that in Milwaukee over the preceding decade. In terms of infant mortality rates, a widely used indicator of community health, Philadelphia was *much* worse off than Cincinnati or Los Angeles. Other large differences between these cities across measures of objective conditions of wealth, social organization, health, safety, etc. are quite easily documented by Census data and the work of the Urban Institute (Flax, 1972).

If we are concerned with assessing the correlation between indicators of objective 'quality of life' and subjective evaluations of life quality, the above discussion immediately shows that *across these cities there is very little correlation between indicators of the two types of social conditions* in that major differences between cities in objective conditions are not at all reflected in similar differences in measures of subjective feelings of life satisfaction. We can support this conclusion with more specific data. However, this first requires the specification of indicators of objective social conditions that can then be correlated with the subjective evaluations obtained from the fifteen city survey.

III. OBJECTIVE SOCIAL INDICATORS

Just as disagreement exists concerning the measures that should be used as subjective measures of well being, disagreement also characterizes the selection of specific variables used as objective 'quality of life' indicators.

There is, however, considerable agreement on the broad categories from which these variables should be drawn. These broad categories include: (1) income, wealth and employment; (2) the environment (especially housing); (3) health (both physical and mental); (4) education; (5) social disorganization (crime, social pathologies such as alcoholism, drug

TABLE II
Objective social indicators employed

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- I. Income, wealth and employment.
 - a. percent of labor force unemployed, 1968. (1)
percent change in (a), 1967-1968.
 - b. percent of households with income less than \$3000. (2)
percent change in (b), 1960-1970.
 - c. per capita income adjusted for cost of living differences, 1968. (1)
change in (c), 1967-1968.
 - II. Environment.
 - a. percent substandard dwellings, 1970. (2)
percent change in (a), 1960-1970.
 - b. air quality (average yearly concentration of three air pollution components, 1968. (1)
change in (b), 1968-1969.
 - c. cost of transportation for a family of four, 1968. (1)
percent change in (c), 1967-1969.
 - III. Health.
 - a. infant (under 1 year) deaths per 1000 live births, 1968. (2)
percent change in (a), 1962-1968.
 - b. reported suicide rates per 100000, 1968. (2)
percent change in (b), 1962-1967.
 - IV. Education.
 - a. Median school years completed by adult population, 1967. (2)
percent change in (a), 1960-1967.
 - V. Participation and alienation.
 - a. percent of voting age population that voted in 1968 Presidential Election. (3)
percent change in (a), 1964-1968.
 - b. per capital contribution to United Fund Appeal, 1968. (1)
percent change in (b), 1965-1970.
 - VI. Social disorganization.
 - a. Reported robberies per 100000, 1968. (2)
percent change in (a), 1964-1969.
 - b. reported narcotics addiction rate, 1968. (1)
percent change in (b), 1964-1969.
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- (1) Thirteen cities (no data on Gary and Newark)
- (2) All fifteen cities
- (3) Thirteen SMSAs (no data on Gary and Newark)

addiction, etc.); and, (6) alienation and participation (Smith, 1973:70). Any complete study of objective quality of life would have to include as least one 'key' variable from each of the above categories. Employing such key variables (Table II lists those employed in this study), each city with which we are concerned can be ranked according to its position relative to that of the other cities in our survey. The 'quality of life' rankings of the cities based on these objective social indicators can then be compared to rankings based on the indicators of subjective quality of life discussed above.³ An empirical statement (Spearman's rho) of the intercorrelations of cities' positions across the measures of objective and subjective quality can be arrived at.

Inspection of the correlation coefficients (Table III) confirms our

TABLE IIIa
Correlations (Spearman's rho) between levels of objective and subjective measures of 'Life Quality'. (Level of significance 0.10). White sample.

Subjective measure	Objective measures	Coefficient
Satisfaction with job	No significant correlations	
Satisfaction with Housing	percent low income households	0.61
	change in percent low income households	0.53
	United fund contributions	-0.48
	Median school years	0.54
	change in air pollution	0.47
Satisfaction with money and income	No significant correlations	
Efficacy	percapita income	0.58
	city robbery rate	-0.54
	change in U.F. contributions	-0.60
	change in median school years	-0.81
	cost of transportation	-0.73
	change in cost of transportation	-0.49
	change in air pollution levels	0.47
Satisfaction with Services	change in low income households	0.54
	change in narcotics addiction rate	0.55
Citizen competence	unemployment rate	0.53
	change in unemployment rate	-0.74
	change in U.F. contribution	-0.49
Government distrust	percapita income	-0.47
	change in narcotics addiction rate	0.48
Constructed measure of Total life satisfaction	No significant correlations	

TABLE IIIb

Correlations (Spearman's rho) between levels of objective and subjective measures of 'Life Quality'. (Level of significance 0.10). Black sample.

Subjective measure	Objective measures	Coefficient
Satisfaction with job	No significant correlations	
Satisfaction with housing	United fund contributions	0.51
	change in air pollution levels	0.45
	change in unemployment rate	-0.51
	change in percent low income households	0.65
Satisfaction with money and income	No significant correlations	
Efficacy	unemployment rate	-0.45
	percent low income households	-0.46
	percent substandard housing	0.46
	infant mortality rate	-0.53
	change in suicide rate	0.64
Satisfaction with services	narcotics addiction rate	-0.50
	percapita income	0.47
	change in substandard housing	0.60
	robbery rate	-0.74
Citizen competence	change in robbery rate	-0.59
	percent low income households	-0.77
	substandard housing	0.57
	change in substandard housing	0.65
	change in infant mortality rate	0.49
	robbery rate	-0.70
Government distrust	change in robbery rate	-0.54
	robbery rate	-0.49
	change in narcotics addiction rate	-0.45
	change in low income households	-0.76
	change in substandard housing	0.48
	change in infant mortality rate	0.55
Constructed measure of Total life satisfaction	unemployment rate	-0.53
	robbery rate	-0.48

earlier impression – no consistent relationship is found. Of the total possible 416 correlations that can be computed for both racial groups, only 11% (9% for whites, 13% for blacks) are significant at the 0.10 level. Moreover, just about half of these are in the wrong direction! No objective measure is identifiable as more strongly related to feelings of subjective life quality than any other measure. Further, there are no consistent relationships between objective social indicators drawn from specific categories (e.g., participation and alienation) and the level of satisfaction

in a similar category of subjective indicators (trust in government or political efficacy).

In short, there appears to be no evidence at all that, as measured by currently popular indicators, the objective social conditions of cities has any relationship with the levels of subjective life quality of their citizens. Changes over time in objective conditions similarly do not appear to have any correspondence with levels of subjective life quality. This lack of correspondence raises some important questions as to the meaning and interpretation of social indicators data and the directions that future social indicators research should take.

IV. CONCLUSIONS

We have found that no relationship exists between the level of well being found in a city as measured by a wide range of commonly used objective social indicators and the quality of life subjectively experienced by individuals in that city. Cities that are most well off as measured by objective indicators are not necessarily the same cities in which people are subjectively the most satisfied with their life situations. Conversely, cities that are worst off objectively are not necessarily the same cities where subjective dissatisfaction is highest. Moreover, while considerable differences in objective conditions between cities are readily apparent, city residence does not appear to be of any great importance in structuring individual evaluations of life experiences.

In short, the level of well being of cities, as described by objective social indicators alone, apparently tells us nothing about the 'welfare' or the 'life quality' actually experienced by individuals living in those cities. While inter-city comparisons of life conditions based on objective social indicators may alert us to inequalities or injustices in the distribution of an important aspect of well being (and, importantly, may alert decision makers about objective conditions that should be dealt with), this data tells us nothing about the levels of subjective life satisfaction of the individuals in those cities. Objective social indicators cannot be taken as direct measures of the welfare or the quality of life actually experienced by individuals.

This distinction must be carefully maintained in future social indicators research. Life satisfaction of individuals appears to be independent of the

physical conditions of the cities in which they live. Therefore, inferences about experienced welfare cannot be made from the readily available objective social indicators of city wide conditions. The 'surrogate' measures of quality of life based on United States Census data or other such reports for large social aggregates (in this particular case, cities) are not really full measures of the phenomena that they have been employed to analyze.

In addition to this warning, these findings also point to avenues of future social indicators data collection and analysis that should be taken. First, one has to note the severe constraints on available social indicators data. While there has been recent large increases in the amount of social indicators research available, data is still limited. The choice of the cities actually examined as well as the choice of indicators employed to measure both objective conditions and the levels of subjective satisfaction were highly constrained. Much more important, however, is the fact that neither objective nor subjective social indicators for geographic units smaller than central cities are readily available. One major problem preventing the generation of such data remains the unresolved question of the characteristics that define communities and neighborhoods within cities. The data analyzed above certainly suggests that objective social conditions of the city as a whole do not relate to the subjective life evaluations of its citizens. But we do know that objective social conditions vary greatly between different geographic areas within cities. It remains a possibility that the objective conditions of sub-areas *within* cities, areas that individuals are more intimately familiar with, may impinge more fully on subjective evaluations of life than do the conditions of the city as a whole. As Rossi notes:

One of the main empirical issues in the social-psychological study of local communities is to ascertain whether the roles played by the local community in the lives of individuals are more in the way of a backdrop, providing a setting in which autochthonous processes are going on, or whether the local community characteristics are a significant input to the level of well being within areas, above and beyond the characteristics of individuals... (Rossi, 1972:84)

However, the answer to this important question must await both a workable definition of 'community' as well as the generation of good social indicators data for these smaller areas.

Similarly, just as the objective conditions of a city vary significantly

among different geographic sub-areas of cities, so do they vary among different ethnic, racial, class and religious groups (to a large extent given the degree of segregation in American cities, these two facts are mutually supportive). Knowing a city-wide objective social indicator would, therefore, not tell us much about the nature of life conditions found in these different social groups. The available attitudinal data gives some evidence documenting the differences in the subjective evaluations of life quality of blacks and whites living in the same city. It has been noted elsewhere that blacks are uniformly more dissatisfied with the conditions of their lives than are whites (Schuman and Gruenberg, 1970). But more importantly for our purposes is the fact that there is no correspondence between the relative levels of subjective life quality of blacks and whites across cities. Taking the constructed measure of total life satisfaction as an example shows that across the cities surveyed no statistically significant correlation exists between the level of subjective life quality of whites and blacks in the same city. In particular, whites in Milwaukee were, overall, the most subjectively satisfied with their life conditions relative to whites in the other fourteen cities surveyed. Yet blacks in most other cities were, in general, more satisfied with their overall life conditions than were blacks in Milwaukee. On the other hand, while blacks in Pittsburgh were more satisfied overall than blacks in all other cities surveyed, whites in Pittsburgh were more dissatisfied with their conditions of life than in every other city but Saint Louis.

It would appear that aggregate objective social indicators must be refined along the dimensions suggested above. It is possible that once such relevant categories as neighborhood, race, ethnicity, etc. are taken into account the relationship between objective and subjective social indicators may increase. But this is just a possibility and must be researched further.

In essence, it becomes clear that there is a need for clarification of the terms employed in social indicators research and of the implications of statements made about social well being and the quality of life based on such research. We have documented the distinctiveness across cities of subjective and objective life conditions as measured by commonly employed social indicators. In particular, it is clear that these objective social indicators as now defined are highly limited tools in the investigation of life quality.

While the development of aggregate objective social indicators is still a valuable undertaking in its own right, it must constantly be remembered that the picture of the conditions of life they present is only one part of the totality of the quality of life experienced by people. The use of objective measures along as quality of life indicators is, therefore, highly suspect. Future developments and refinements may produce a greater correlation between objective and subjective social indicators for smaller, more carefully defined and more homogeneous groups. However, for the larger aggregates analyzed in this paper, no correspondence appears. At the current time, objective social indicators drawn heavily from government reports for large units, units defined more by political boundaries than by socio-psychological ones, do not appear to be very accurate measures of the total quality of life found therein.

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NOTES

¹ The cities included in the survey are: Baltimore, Boston, Chicago, Cincinnati, Cleveland, Detroit, Gary, Milwaukee, New York, Brooklyn, Newark, Philadelphia, Pittsburgh, St. Louis, San Francisco, Washington, D.C. Of these cities, the objective social conditions of thirteen have been extensively examined by the Urban Institute (Gary and Newark are the other two cities).

² The standardized additive score representing general life satisfaction is constructed by transforming individual responses across the measures of each specific domain into standardized Z scores and then combining them additively into a single approximate measure of total subjective life quality.

³ The ranking of cities on subjective social indicators is based on differences in the mean scores representing the 'average' level of satisfaction in a given city for a specific domain.

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