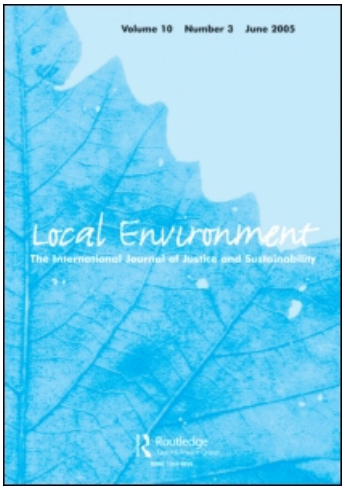

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Can city QOL indicators be objective and relevant? Towards a participatory tool for sustaining urban development

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ARTICLE

Can City QOL Indicators Be Objective and Relevant? towards a participatory tool for sustaining urban development

JOSEF LEITMANN

ABSTRACT *The paper concludes its first section by answering the title question: no, QOL indicators cannot be purely objective but yes, they can be relevant while being subjective. The second section develops a framework for making measures of urban QOL more relevant. The objective is that such indicators can be a useful tool for sustaining urban development into the next millennium. The framework consists of three elements: (a) a process—QOL indicators should be locally developed through an approach that combines expertise with stakeholder consultation; (b) an output—developing, collecting and evaluating QOL measurements should be linked to implementation of policies, programmes and/or projects; and (c) a method—a series of tested guidelines should be applied to ensure that QOL indicators are realistic, both logistically (they can be collected) and analytically (they are appropriate measures). Real-world examples are used to illustrate points made in the paper.*

Introduction

The major challenge made against quality-of-life (QOL) indicators, urban and otherwise, is that they are subjective and irrelevant.[1] QOL measures are subjective because 'quality' is defined according to individual, expert and cultural values; thus, indicators and their valuation can vary almost infinitely according to who is observing and being observed. QOL indicators can be irrelevant because they are developed for purely academic, sensationalistic or bureaucratic reasons without being linked to policy or process. In addition, technical problems can diminish the relevance of QOL measures. However, there are a number of factors that can make QOL assessment more useful as a tool for sustaining urban development. The first section of this paper looks at these problems of objectivity and relevance.

The second section develops a framework for making measures of urban QOL more relevant. The objective is that such indicators can be a useful tool for sustaining urban development into the next millennium. The framework consists

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of three elements: (a) a process—QOL indicators should be locally developed through an approach that combines expertise with stakeholder consultation; (b) an output—developing, collecting and evaluating QOL measurements should be linked to implementation of policies, programmes and/or projects; and (c) a method—a series of tested guidelines should be applied to ensure that QOL indicators are realistic, both logistically (they can be collected) and analytically (they are appropriate measures).

Can Urban QOL Indicators Be Objective and Relevant?

Can Urban QOL Indicators Be Objective?

> As the contrary trends in population redistribution into and out of the city indicate, any evaluation of quality of life will be complex and potentially contradictory. Both academics and practitioners have failed to reach an unambiguous resolution of the question. (Grayson & Young, 1994)

There is no objective measure of urban QOL for three reasons: (a) different levels of observation (individual and social) can have conflicting outcomes; (b) diversity in the definition of QOL measures can result in different answers to the same question; and (c) cultural factors can lead to different definitions of urban quality. To begin, the quality of urban life is very much in the eye of the beholder or beholders: "on the one hand, there is the quality of an individual's life, a reflection of how well his life is going; but there is also a broader concept, capturing roughly the quality of the living conditions around an agent." (Megone, 1990). The latter measure, or public QOL, can be picked out and assessed independent of how well individual welfare, or private QOL, is proceeding.

At the level of private QOL, psychologists would argue that there are as many beholders as there are citizens in a city. Thus, quality of life should be understood at the level of the individual. Consequently, standardised measures have been developed to assess the extent to which individuals are satisfied or dissatisfied with different areas of their own lives. Such assessments typically cover health, self-esteem, goals and values, money, work, play, learning, creativity, helping, love, friends, children, relatives, home, neighbourhood, and community (Frisch, 1997).

For public QOL, it may be useful or necessary to consider the city, rather than the individual, as the unit of analysis. Certainly, there are features of the city that will affect many areas of individual QOL: urban air and water quality influence health; a city's economic productivity, employment and price levels affect individual wealth; recreational and green space have an effect on opportunities for play; crime rates influence satisfaction with one's neighbourhood, and so on. Then, it may be necessary to make a city-level assessment because a census of individual satisfaction may be impractical for reasons of time, cost and willingness to participate.

Both sets of assessment may be necessary to get a full picture of urban QOL. Indeed, in the introduction to a review of QOL in cities, Robert Rogerson of the University of Strathclyde's 'Quality of Life Group' concludes:

> ...any assessment of quality of life in the city has to be conducted at two levels. First, at a personal level where each person assesses their own level of satisfaction with life within their life sphere and, second, an evaluation of the components of the city environment which help to create the sense of satisfaction (or dissatisfaction). (Grayson & Young, 1994)

By conducting two levels of evaluation, a statistically valid sample of individual assessments could then be aggregated and correlated with key determinants at the city level.

Given this dual structure for assessing urban QOL, the first objectivity problem with QOL indicators is that there can be contradictions between city-level measurements of quality and individual perceptions. QOL researchers have long noted a low correlation between 'objective' measures of living conditions and self reported well-being. For example, Campbell *et al.* reported in 1976 that the least educated fifth of their sample reported significantly higher satisfaction with their housing than quintiles with high education, although the latter objectively enjoyed better living conditions (Moum, 1983). The explanation is that people tend to adapt to their circumstances and restrict their horizons. The methodological implication is that high QOL scores amongst individuals or sub-groups does not mean there is no need to improve city-level conditions. Again, the definition of quality is in the eye of the beholder.

The second problem is that measurements of QOL at either level usually give the appearance of objectivity but a cursory review of results indicate that they are not. There are no standard measures of QOL at either the individual or the city level. Thus, there is no consensus about the objective components that make up QOL. The consequence is that researchers are free to define QOL according to their own biases, objectives or schools of thought. The result is that different analyses can come up with inconsistent answers to the same question. This is illustrated in Table 1 below which compares studies that have attempted to determine the 'best' US cities in terms of QOL. Understandably, economists (the QOLI ranking), environmentalists (the WRI ranking), business people (the *Fortune* rankings), and those concerned with cultural/political correctness (the *Utne Reader* ranking) develop diverse sets of QOL indicators and consequently come to quite different conclusions.

Finally, the definition of quality can be culturally bound. For example, a 1996 analysis of QOL in three Japanese metropolitan areas assessed 'objective' criteria such as welfare, living environment and psychological satisfaction. Interestingly, the industrial city of Nagoya came out on top. A surprised foreign resident sought an explanation in cultural differences: "It's the Japanese idea of comfortable living: nice, big, clean, safe, good transportation system and clean roads, but boring as hell." (May & Gibson, 1996) Emphasising tranquillity as part of quality in a Japanese city is in direct opposition to the excitement implied

TABLE 1. Comparison of QOL rankings for US cities

Ranking	*Key Indicators*	*Top Five Cities*
QOLI Ranking (Blomquist *et al.*, 1988)	WAGES AND PRICES: housing rental prices, wages, commodity prices, implicit amenity prices	Pueblo, Norfolk/Virginia Beach/Portsmouth, Denver-Boulder, Macon, Reno
WRI Green Metro Index (World Resources Institute, 1994)	ENVIRONMENT: air & drinking water quality, toxic emissions, energy use, transport patterns, park land	San Antonio, W. Palm Beach, Austin, Honolulu, Orlando
Fortune 'Best Places to Balance Work & Family Life' (Associated Press, 1996)	BUSINESS AND FAMILY: business climate, tax level, incidence of crime, quality of schooling, availability of culture, cost of a martini	Seattle, Denver, Philadelphia, Minneapolis, Raleigh-Durham
Fortune 'Most Improved Cities' (Faircloth, 1997)	BUSINESS AND AMENITIES: demographics, business climate, cost of living, incidence of crime, air pollution, 'fun quotient'	New York, Denver-Boulder, Boston, Seattle, Raleigh-Durham
Utne Reader 'Most Enlightened Towns' (Walljasper, 1997)	LIFESTYLE: access to alternative health care, lively media, breadth of cultural activity, diverse spiritual opportunities	Ithaca, Portland, Durham, Burlington, Madison

in the 'fun quotient' used by *Fortune* in its latest ranking of North American cities (see Table 1).

The outcome of this brief critique of QOL indicators is that they cannot be objective; by nature, they are relative and subjective. Seabright (1993) nicely summarises the situation:

> First, different conceptions of the good life will place different emphasis on the commodities and services necessary for their pursuit. Second, different cultures vary to an extent in their views as to what is and is not the proper subject of a contract ... unless it is possible to delimit a set of values that must be held by all rational beings *qua* rational beings *and* that are sufficiently rich to characterize a social contract, then the outcome of a social contract will be sensitive to the specification of the parties involved. So, therefore, will be a contractarian conception of the standard of living.

In other words, different societies define the 'good life' in different ways and this must be reflected in culture-specific social contracts as well as in QOL measures. Thus, QOL measures are subjective because of potential contradictions between private and public levels of measurement, the differing perspectives of the researchers who seek to measure QOL, and cultural differences.

A caveat to this line of argument is that there are some fairly universally accepted QOL indicators, though there is no standard definition of QOL. Perhaps the most commonly accepted set of measures are those concerning human health, e.g. life span, child mortality and, for the urban environment, acute respiratory

infection and gastrointestinal disease rates. Other common measures include rates for literacy, employment and crime, and income per capita. This limited set, though, cannot be said to constitute a universally-shared definition or measurement of the good life.

Can Urban QOL Indicators Be Relevant?

Like quality, relevance is a subjective concept. In this paper, urban QOL indicators are deemed to be relevant if they can effectively contribute to policies and processes for sustainable urban development. This sub-section begins by assessing four different motivations for developing urban QOL indicators according to this author's subjective definition of relevance. Then, some of the technical problems that can make any type of QOL measures irrelevant are addressed.

To begin, the reasons for developing urban QOL measures can be assessed to determine whether they will yield relevant results. There are four major reasons why people seek to assess the quality of urban life: (a) to make comparisons; (b) to identify problems; (c) to develop policies, programmes and projects; and (d) to monitor and evaluate the implementation of interventions. The degree of relevance for indicators emerging from each motivation is briefly discussed below using examples from practice.

Perhaps the most common, or most well known, set of urban QOL indicators are those that have been developed to allow for comparison between cities. Examples of such indicators include transnational assessments such as the UNCHS Urban Indicators Programme (UNCHS, 1997) and the Population Crisis Committee's 'urban living standard score' for the world's 100 largest metropolises (Population Crisis Committee, 1990) as well as national evaluations like the QOL review of Brazil's 187 largest cities (Souto *et al.*, 1995). The relevance of such comparative analyses depend on their intended use. The least relevant are the 'Best City' beauty contests; their utility is limited to those who are so mobile they can live wherever they choose *and* who happen to agree with the subjective criteria used to select 'best' cities. More relevant are the transnational measures that allow city managers and residents to compare how well they are doing, ask why they are doing well or poorly, and potentially seek to share problems and solutions with one another. Regularly collected indicators like those used by UNCHS are more relevant than one-off studies such as that of the Population Crisis Committee because they allow for an understanding of how quality changes over time. The most relevant of such city-to-city comparisons are those that are conducted at the national level which seek to evaluate differences. These studies, like the Brazil analysis, tend to use measures that are more relevant to a national cultural, economic and political context, and seek to explain differences in quality that emerge from rankings.

One of the most relevant applications of comparative analysis is not between cities but within cities. Intra-urban quality indicators have been used to compare and diagnose problems for some time, especially in the health field. An analysis of intra-urban differentials in London was critical in determining the link between cholera and drinking water in the 19th century (Kjellen & McGranahan,

1997). Most recently, the Pan-American Health Organization (PAHO) has emphasised the key role of comparing intra-urban indicators in order to understand social and environmental disparities and vulnerabilities (PAHO, 1997).

The second reason for developing and applying measures of urban quality is to identify problems. Problem identification is inherently relevant in a framework that seeks to clarify issues and overcome constraints to sustaining urban development. Examples of QOL indicators as diagnostic tools include the World Bank/UNCHS Housing Indicators Program (World Bank, 1992) at the international level and the evaluation of Brazilian cities by the *Polis* NGO (Souto *et al.*, 1995). The former was used to diagnose constraints on the effective functioning of housing markets in particular countries (e.g. determining why Thailand's market is more efficient and Malaysia's less so) as well as to develop the World Bank's housing policy (World Bank, 1993) which then influenced project design and selection. The latter was used to highlight regional disparities and focus on particular problems such as solid waste management, access to pre-school education and rates of urban infant mortality. These urban QOL measures are relevant because they help local decision makers and residents identify problems that they may suffer more intensely than others and, through comparison, the indicators may help explain some of the causes of their problems.

The third reason for employing urban QOL measures is to develop policies, programmes and projects. These indicators are relevant to the extent that such interventions contribute to sustaining urban development. At the international level, the Housing Indicators Program has been used by UNCHS and the World Bank to assist countries with policies and projects that improve the functioning of urban land and housing markets so as to increase the affordability and quality of shelter. At the national level, Brazil has made use of assessments of municipal quality (especially poverty indicators) to develop and target social assistance programmes. The *Comunidade Solidaria* programme uses urban indicators to target municipalities that have a high degree of poverty and limited financial resources and accelerate support for youth development, children's health, income and employment generation, food security, and urban services (Leitmann, 1995).

Finally, urban QOL indicators are applied to monitor and evaluate the implementation of interventions. These measures are relevant to the extent that they can yield information about whether the intervention is moving a city towards or away from a sustainable development path. For example, the World Bank has developed urban sectoral and project performance indicators "to enhance the development impact of the Bank's portfolio through better initial sector work, better appraisal practices, more effective implementation support, and clearer accountability for portfolio performance results" (World Bank, 1995). These indicators include measures of urban poverty, economic productivity, housing, local governance, and environmental management at both the sectoral and project levels. Such measures are most relevant when they are routinely employed to assess progress towards sustainability objectives.

Several technical factors can diminish the utility of QOL indicators, regardless of why they were developed and how they are used. These include:

- TOO NARROW—researchers can too narrowly define quality because they may be constrained by a disciplinary perspective. For example, one group of economists (Blomquist *et al.*, 1988) limited their analysis of urban QOL to those characteristics that could be explicitly or implicitly priced, because their profession demands a monetary valuation for analysis.
- TOO CRUDE—economists and development specialists have long relied on measures of domestic product (GDP at the national level and local product at the city level) as proxies for well-being. Yet, GDP is just a gross measure of market transactions; "it makes no distinction whatsoever between the desirable and the undesirable, or costs and gain" (Cobb *et al.*, 1995). Thus, domestic product per capita can be high in a city where there are oppressive levels of household labour and diminishing leisure time (undesirable but unvalued) or much crime, resource depletion and environmental degradation (undesirable but valued).
- TOO CONSTRAINED—the drunk looks for his keys near the streetlamp because that is where the light is; the urban QOL researcher may be similarly constrained by the availability of data. For example, the Population Crisis Committee ranking of the largest 100 metropolitan areas on 10 easy-to-find measures and, even then, was confronted by lack of data and lack of standard indicators (in the case of air quality) (Sufian, 1993).

These technical factors can diminish the utility and ultimate relevance of urban QOL measurements. Indicators that are too narrow miss important variables that may contribute to a citizenry's definition of quality. Measures that are too crude risk being incomplete at best and inaccurate at worst. Analyses that are too constrained because of limited data can be plagued by both sets of problems.

This brief assessment of the relevance of urban QOL indicators has thus answered part of the paper's title question by saying, yes, indicators can be relevant. They are more relevant when: (a) they are more reflective of local needs and conditions (e.g. the comparative work by *Polis* in Brazil and the intra-urban level of analysis); (b) they are linked to real-world decision making and implementation; *and* (c) they do not succumb to the technical problems identified at the outset of this sub-section.

Towards a Tool for Sustaining Urban Development

The previous section provides useful guidance for how one might make urban QOL measurement a more relevant tool for sustaining urban development. Recognising that such measures are subjective, QOL indicators should be developed as close to the target population as possible. Following the argument that relevance is related to the degree that indicators have a real-world impact, urban QOL measures should be linked to the development process. Realising that technical problems can limit the utility of QOL assessment in cities, guidelines should be drawn from experience to help those developing such indicators to avoid technical pitfalls.

Local and Participatory Development of QOL Indicators

All urban QOL indicators must be developed by someone as there is no ideal 'objective' set of indicators. Too often, these measures are formulated only by experts in a top-down fashion and often at some distance from the people whose quality of life is to be assessed. Experience suggests that stakeholder participation improves the performance of development interventions (Isham *et al.*, 1994). More specifically, the joint evaluation of urban conditions by experts *and* decision makers *and* stakeholders affected by problems within a city yields more comprehensive and more acceptable results than a purely expert-driven approach (Leitmann, 1993; UNCHS, 1997). Thus, urban QOL indicators should be developed at the level where they will be applied (e.g. neighbourhood, district, city, metropolitan area, or region) and by representatives of the stakeholder groups that are both knowledgeable and concerned about QOL issues. An example of how this approach has been applied is summarised in Table 2.

Merely designing and applying a local and participatory process does not guarantee that urban QOL indicators will be better and more relevant. Some of the problems that beset this phase of indicator development include:

- EXCLUSION OF STAKEHOLDERS—the full range of concerned stakeholders may not be invited to participate in the process of developing indicators. Typically, vulnerable groups such as women, low-income households, children, the elderly, and the disabled can be overlooked. This may result in failure to include key variables in the set of QOL measures, e.g. degree of accessibility for the disabled;
- IMBALANCED ROLE OF EXPERTS—the data generated by 'bottom-up' processes may need to be filtered and interpreted by experts. This process can lead to the imposition of the biases and disciplinary perspectives of the analysts, making the resulting indicators less representative and relevant (Kind, 1990); and
- INCOMPATIBILITY FOR MAKING COMPARISONS—the indicators that emerge from a stakeholder-driven development process may be so idiosyncratic that they cannot be used for comparative purposes with other communities. This makes it difficult for the locality to assess itself and learn from other cities.

There are remedies to overcome each of these constraints. A simple checklist of the vulnerable groups cited above can be used to ensure that no interest group is overlooked. Reviewing the range of participants involved in similar exercises in other cities, e.g. Leicester, can also help avoid the problem of exclusion. If experts need to be used to filter and evaluate the information generated by stakeholders, then their proposed set of QOL indicators can be taken as a draft which should subsequently be reviewed by a representative range of stakeholders and modified if necessary. This should help minimise the bias that may enter into indicator development through filtration of stakeholder inputs. Incompatibility can be partially overcome by including a sub-set of nationally or internationally-used urban QOL measures, such as the UNCHS urban indicators, as part of the local QOL package of indicators.

TABLE 2. Participatory development of QOL indicators in Leicester

Leicester is a medium-sized city of about 300 000 located in the middle of Britain with rich and diverse communities. In response to the challenge of the Rio Summit, the city conducted an in-depth consultation to find what was important to its citizens' long-term quality of life.
The process involved three steps:
SHORT QUESTIONNAIRE—sent to all residents asking their views on what was good and not so good about Leicester and which issues most affected their quality of life;
IN-DEPTH QUESTIONNAIRE—a representative sample of about 800 citizens were interviewed in their homes with a detailed survey that again focused on key QOL issues; and
STAKEHOLDER CONSULTATIONS—specific groups of stakeholders were asked to respond to material envisaging future urban QOL, including young people, the disabled, businesses, women's groups, ethnic minorities, trade unions, and faith groups.
This information was then combined with expert judgement to select 14 core QOL indicators to indicate trends towards or away from sustainability. The indicators were: homelessness; satisfaction with neighbourhood; perceived improvement in the city centre; levels of earned income; unemployment rate; energy use; loss of good quality wildlife habitat; air quality; river and canal pollution; asthma levels; violent crime; educational attainment; mode of transport to work; and rate of domestic refuse collected.

Source: UNCHS, 1996.

Linking Urban QOL Indicators to the Development Process

Relevant urban QOL measures cannot be formulated without reference to the process of urban development, no matter how participatory the preparatory process. QOL measures can be divided into two categories—purely physical indicators and policy indicators (Young & Ryan, 1995). Physical indicators are typically chosen from existing datasets that are readily accessible; they may or may not help evaluate whether a city is on a sustainable development path. Policy indicators can be either physical measures or process indicators; they are specifically selected to determine whether a city is achieving a policy objective. Examples of urban environmental indicators that are linked to policy objectives are presented in Table 3.

TABLE 3. Urban environmental indicators linked to policy objectives

Policy Objective	*Selected indicators*
Improve access to basic environmental infrastructure and services	% of population with regular solid waste collection % of households with access to safe drinking water
Reduce or prevent urban pollution	% of BOD removed from urban wastewater produced
Encourage sustainable resource use	% of housing stock located on fragile lands
Encourage sustainable environmental practice	% of urban trips made by public & non-motorised modes % of waste stream that is recycled, recovered or re-used
Minimise vulnerability to environmental hazards	Mortality and morbidity rates attributable to man-made and natural disasters

Source: World Bank, 1995.

QOL indicators can be used throughout the process of urban policy development and implementation. Specifically, urban QOL indicators can be used to: (a) identify key development problems that require new policies or modification of existing policy; (b) prioritise the range of identified problems; (c) facilitate the choice between competing policy options; (d) monitor progress towards policy objectives; and (e) provide feedback and inputs for developing new policies (Society for Development Studies, 1996). Definitions of problems, priorities and progress will all be culturally bound, reinforcing the need for a local and participatory process, as described in the previous section.

To ensure that QOL measures are directly linked to urban development policy, they can be an intrinsic part of a process that develops a sustainable path for a city, such as participation in the development of a local Agenda 21. The International Council for Local Environmental Initiative's (ICLEI) *Local Agenda 21 Planning Guide* recommends that this involve establishment of partnerships, community-based issue analysis, action planning, implementation and monitoring, and evaluation and feedback (ICLEI, 1996). QOL indicators can be developed as part of this process and applied for evaluation and feedback to determine whether sustainable policy goals and physical targets are being achieved. In addition, the use of QOL measures should be institutionalised so that there is regular and transparent reporting on performance to stakeholders.

Applying Guidelines to Select Realistic Urban QOL Indicators

Some of the technical problems that limit the relevance of urban QOL measurements can be avoided or reduced by following a simple set of guidelines when developing indicators. Experience suggests that, in addition to being developed in a participatory manner and linked to the urban development process, a useful set of QOL indicators should have the following characteristics:

- Measurable—indicators should be quantifiable;
- Based on existing data—when possible, indicators should be derived from reliable existing information to speed up their use and minimise costs. However, important information gaps may exist that justify original research to generate new and needed data;
- Affordable—the financial cost and time required to assemble and analyse indicators should be prescribed by a predetermined budget;
- Based on a time series—the same indicator should be collected over a regular interval so that change can be evaluated;
- Quickly observable—indicators that can be developed soon after data collection are more useful than those that require lengthy processing;
- Change-sensitive—indicators should change as conditions change so that they can accurately reflect reality;
- Widely accepted—indicators must be understood and accepted by their users;
- Easy to understand—indicators should be reported in a simple fashion so that a wide range of people can understand them; and
- Balanced—indicators should be politically neutral and allow for measurement

of both positive and negative impacts (Young & Ryan, 1995; Society for Development Studies, 1996).

Conclusion

The key conclusions of this paper are that:

- professionals and academics should stop wasting time pursuing comprehensive and universal measures of urban QOL because such indicators are inherently subjective and relative;
- the most useful QOL measures reflect local needs and conditions, link to real-world decision-making and implementation, and avoid a range of technical pitfalls;
- urban QOL indicators should be formulated at the level where they will be applied with the participation of both experts and other stakeholder groups;
- QOL measures should be linked to urban development policy, programmes and projects, e.g. as part of a process that develops a sustainable path for a city; and
- realistic urban QOL indicators must be measurable, largely based on existing data, affordable, regularly collected, quickly observable, change-sensitive, widely accepted, easy to understand, and balanced.

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Note

[1] This article takes the broadest and most inclusive definition of QOL to include perceptions of wellbeing as well as measures of living standards and environmental quality, in part because there is no universally accepted definition of QOL.

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