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Principles of urban quality of life for a neighborhood

Hamam Serag El Din [a], Ahmed Shalaby [a], Hend Elsayed Farouh [b], Sarah A. Elariane [b,*]

[a] Cairo University, Faculty of Engineering, Department of Architecture, Egypt
[b] Housing & Building National Research Center (HBRC), Egypt

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Abstract Urban quality of life is a notion that has been discussed recently in various studies as a response to many problems facing the new towns all over the world as well as in Egypt. The purpose of this paper is to decompose the term urban quality of life into other more precise terms such as quality, quality of life and urban/urban planning. The paper also aims to address the notion of sustainable development and tries to understand its relationship with the notion of quality of life. Further, it deduces urban quality of life definition and dimensions. On the other hand this paper discusses contemporary urban planning theories and approaches raised in the late of twentieth century in order to provide a high and sustainable quality of life and protect the natural environment. Finally, a matrix concluding the relationship between the principles of these contemporary urban planning theories and approaches and urban quality of life dimensions is developed, in order to achieve a set of principles that address environmental, physical, mobility, social, psychological, economical and political concerns called urban quality of life principles. These principles represent a guide useful for participants of the design process and for policy makers.

Introduction

The conventional urban development, especially those occurred after the World War II, is facing many problems: high vehicle miles of travel, insufficient level of services, diminished air quality, degraded sense of place, segregation in land use and other non urban feature problems. It is obvious that these problems negatively affect the human quality of life. Quality of life is considered one of the most important dimensions for sustaining any urban development. The desire to improve the quality of life in a particular place or for a particular person or a group is an important focus of attention for planners [1].

Quality of life has been widely used in a wide range of contexts, including the fields of international development,

* Corresponding author.
E-mail addresses: dr.serageldin@gmail.com (H. Serag El Din), amshalaby@gmail.com (A. Shalaby), hendfarouh@gmail.com (H.E. Farouh), hendfarouh@gmail.com (H.E. Farouh), saraelariane@gmail.com (S.A. Elariane).

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healthcare, political science, built environment, education, recreation and leisure time, and social belonging. The objective of this paper is to study the urban design features that could enhance the quality of life in the built environment through the analysis of contemporary urban planning theories and approaches which appeared in the late twentieth-century, such as New Urbanism, Smart Growth, Urban Village and Principles of Intelligent Urbanism; whereas the objectives of these theories and approaches are to develop communities that will more successfully serve the needs of those who live and work and to control the urban sprawl while enhancing urban quality of life. These features of urban design are introduced in the form of a set of urban planning principles called urban quality of life principles.

Methodology

This study uses the Descriptive Analytical Approach to identify the general concepts of quality of life, sustainable development and urban quality of life. In addition it analyzes the contemporary urban planning theories and approaches that have been applied on many international case studies aiming at enhancing quality of life. Through this analysis urban quality of life principles for a neighborhood have been deduced.

Urban quality of life definition

Urban quality of life is not a simple term that has a clear or an agreed definition but is a complex concept which might be defined by various disciplinaries. The term urban quality of life is not used to describe some physical features but to describe all the relationship, the dynamics, and the reticular relationship that exist between those physical features. Thus, the definition of urban quality of life is network and complex rather than linear and very elementary. Accordingly, for defining this multidisciplinary concept the author will try to decompose it into more precise terms and find the relationship between those terms.

Quality

Quality is one of those words which are used unthinkingly by everybody, but which stubbornly evade definition. In general usage and in publicity circles, the word 'Quality' is frequently used to designate the attractiveness or the excellence of the product [2].

Quality of life

Quality of life is a concept which in recent years has generated a great deal of interest, but it is not only a notion of the twentieth century. Rather it dates back to philosophers like Aristotle (384–322 BC) who wrote about "the good life" and "living well" and how public policy can help to nurture it. Much later, in 1889, the term Quality of life was used in a statement by Seth: "we must not regard the mere quantity, but also the quality of "life" which forms the moral end" [3]. Quality of life has been the focus of many studies but a consensus as to how it should be defined has not been reached. Quality of life is a complex, multidimensional construct that requires multiple approaches from different theoretical perspectives. There have been many attempts to define what constitutes quality of life in the different disciplines. More than 100 definitions of life quality have been noted in the literature.

Quality of life is "*the satisfaction in your life that comes from having good health, comfort, good relationship etc., rather than from money*" ... It is "*The personal satisfaction (or dissatisfaction) with the cultural or intellectual conditions under which he lives*" [4].

Quality of life refers to the day living enhanced by wholesome food and clean air and water, enjoyment of unfettered open spaces and bodies of water, conservation of wildlife and natural resources, security from crime, and protection from radiation and toxic substances. It may also be used as a measure of the energy and power a person is endowed with that enable him or her to enjoy life and prevail over life's challenges irrespective of the handicaps he or she may have [5].

However, within a context, that is, a given time, place and society, some agreements can usually be reached on what would constitute quality of life. In other words, people's needs and the fulfillment of their aspirations and needs can be defined in a relatively precise manner within a specific cultural context. There are sufficient elements of quality of life held in common by members of a society for the concept of quality of life to be meaningful.

Otherwise, the concept of community quality of life is often used to explore community factors, resources, and services that are observed by community members as factors influencing their life quality or assisting them in coping with each other [6]. Myer writes that "*a community quality of life is constructed of the shared characteristics residents experience in places (For example, air and water quality, traffic or recreational opportunities), and the subjective evaluations residents make of these conditions*".

Sustainable development

Like Quality of life there is no definition of sustainable development that is universally accepted, but one proposed by the world commission on Environment and Development (the Brundtland Commission) has been cited frequently: "*meeting the needs of the present without compromising the ability of future generations to meet their own needs....*" There is no doubt that the fulfillment of needs is not only a precondition for sustainable development but also for individual well-being and thus for a high quality of life. Others have elaborated on the above sustainable development definition, emphasizing that sustainable development should ensure that environmental, social and economic issues are considered and sustained for an unforeseeable future.

The concept of quality of life is highly relevant when considering sustainable development. It may be argued that quality of life reflects the social dimension of sustainable development. This does not imply that quality of life is affected by social conditions only. But also quality of life may be affected by economic, social and environmental conditions. Since sustainability implies a balance between environmental, social and economic qualities, policies that seriously decrease an individual's quality of life can hardly be called sustainable [3].

On the other hand sustainable development could affect an individual's quality of life positively or negatively as some sustainable development issues are acceptable and others are unacceptable to the individual member of society. For example, to achieve a sustainable transport system, drivers may well have to drive less; for some people, driving a car is more attractive than other modes of transport, because of its convenience, independence, flexibility, comfort, speed, perceived safety, and privacy; the car also provides more status and pleasure than other modes of transport; it is a means of self-expression, and enables one to control a powerful machine. Consequently, it is important to know which elements of different sustainable development have high or low public acceptance. As well as policymakers should give special attention to possible effects on the most important quality of life indicators when they design and implement sustainable development [7].

Urban planning

Urban planning is a technical and political process concerned with the control of the use of land and design of the urban environment, including transportation networks, to guide and ensure the orderly development of settlements and communities [8]. Urban planning is a branch of architecture that focuses on organizing metropolitan areas. It is made up of several different fields, from engineering to social science. City planning aims to provide a safe, organized, and enjoyable home and work life for residents of both new and established towns. Today, some of the largest concerns of urban planning are building locations, zoning, transportation, and how a town or city looks. Planners also try to eliminate run down areas and prevent their development, as well preserve the natural environment of the area [9].

This study focuses on the neighborhood planning as a spatial unit which has self-sufficiency that ensures the establishment of social interactions between residents. In other words, a neighborhood is a small but relatively independent area of dwellings, employment, retail, and civic places and their immediate environment that residents and/or employees identify with in terms of social and economic attitudes, lifestyles, and institutions [10].

Urban quality of life

> "Socrates, we have strong evidence that the city pleased you; for you would never have stayed if you had not been better pleased with it" – Plato [11]

The desire to improve the quality of life in a particular place or for a particular person or group is an important focus of attention for planners. Improving the quality of life in cities is no longer a simple matter of bricks and mortar, but the human satisfaction with different urban attributes such as transportation, quality of public spaces, recreational opportunities, land use patterns, population and building densities, and ease of access for all to basic goods, services and public amenities. As well as social attributes such as protecting public health, safety and security, education and social integration, promoting equality and respect for diversity and cultural identities, increased accessibility for persons with disabilities, preservation of historic, spiritual, religious and culturally significant buildings and districts, promoting spatial diversification and mixed use of housing and services at the local level in order to meet the diversity of needs and expectations. These are in addition to environmental attributes such as respecting local landscapes and treating the local environment with respect and care.

Many researchers tried to interpret and measure the urban quality of life concept:

McCrea et al. [12] examined different geographic levels of subjective urban quality of life. Regional satisfaction was best predicted by evaluations of regional services (such as health and education) and the cost of living, while evaluations of environmental and urban growth problems were significant predictors of regional satisfaction for younger persons. Neighborhood satisfaction was best predicted by evaluations of social interactions, neighborhood crime and public facilities (parks, libraries), while housing satisfaction was predicted best by age of home and home ownership.

Richards et al. [13] investigated the factors that are most important in improving the quality of life of residents in informal housing as well as the main obstacles to a better quality of life.

Clark and Kahn [14] estimated the willingness to pay for urban cultural amenities such as museums, theater, dance, instrumental music and zoos. For a typical city, the marginal benefits from improving these cultural goods are estimated to be in the $.85–$57.9 million range for an additional theater and an additional zoo, respectively.

Chor Chin and Foog [15] explored the relationship between the accessibility to prestigious schools and the value of housing properties in Singapore. The findings indicate that the accessibility to prestigious schools does affect residential property price, and it significantly explains the variation in housing prices in Singapore. However, these are not valued as highly as other attributes, such as neighborhood prestige and tenure of the property. Sensitivity studies of housing prices show that the extent of the influence varies with distances to the Central Business District, school enrollment, and performance ranking.

Song and Knaap [16] analyzed the prices of single family houses when mixed land uses are included in neighborhoods in Washington County, OR. They conclude from this research that housing prices increase with their proximity to – or with increasing amount of – public parks or neighborhood commercial land uses. They also find, however, that housing prices are higher in neighborhoods dominated by single family residential land use, where non-residential uses were evenly distributed, and where more service jobs are available. Finally, they find that housing prices tended to fall with proximity to multi-family residential units.

Adair et al. [17], focused on their study upon factors affecting the price structure of residential property in the Belfast Urban Area, examining the relative influence of property characteristics, socio-economic factors and the impact of accessibility. Results indicate that accessibility is of little significance in explaining variation in house prices on a city-wide scale but at a sub-market level, particularly in low-income areas, accessibility can be an important influence. At the end, the analysis highlights the importance of investigation at a sub-market level and draws conclusions regarding the complexity of relationships within an urban area.

Lora et al. [18] tried to find criteria to prioritize policy actions for improving the quality of life in the region's rapidly growing cities. The study tries to produce quality of life indices

to compare neighborhoods and assess the potential impact of improved public amenities and services on housing prices and quality of life for different socioeconomic groups. They looked at eight cities in six Latin American countries as case studies.

Based on previously mentioned definitions and case studies, it can be deduced that the term *urban quality of life* refers to the *urban planning* which objective is to realize the *sustainability* of the development with respect to an individual's *quality of life*.

The description of urban quality of life is complex and not linear, as to understand the concept, one should not only include the essence of the subject, but also all the relationships, the dynamics, and the reticular relationships that exist between the various dimensions of this concept, i.e. the network.

It should be noted that urban quality of life does not refer to the quality of life in urban areas only as conventionally known but it refers to the quality of built environment in both urban and rural areas.

Urban quality of life dimensions

Urban quality of life is a multi-disciplinary concept in other words it is a multi-dimensional concept. This ambiguous and complex concept must be represented by a reticular relationship between various dimensions, whereas urban quality of life is the result of relationship between these dimensions. Such relationships differ and are determined according to places and societies. Obviously, we cannot understand the urban quality of life of a certain place through only one dimension but through the relationship between those dimensions.

Based on the literature review, it can be deduced of seven main dimensions which contribute to realize the urban quality of life: environmental urban quality of life; physical urban quality of life; mobility urban quality of life; social urban quality of life; psychological urban quality of life; economical urban quality of life; political urban quality of life. These dimensions are interrelated and dependent on each other as reflected in the "*Heptagon Shape*" Fig. 1.

The first dimension, generically titled Environmental Urban Quality of Life, refers to the natural aspects of the neighborhood. The second dimension, Physical Urban Quality of Life, refers to facilities, urban fabric, land use, services and facilities and infrastructure. The third dimension, Mobility Urban Quality of Life, discusses the accessibility, traffic and transportation issues. The fourth dimension, titled Social Urban Quality of Life, comprises the indicators that refer to the social dimension of the neighborhood and to the people interaction, that is, questions regarding individual choices and the participation of citizens. About the fifth dimension, Psychological Urban Quality of Life, it discusses the issues concerning the feeling of citizens toward their neighborhood, such as the identity of the place. The sixth dimension is Economical Urban Quality of Life which characterizes the neighborhood as a place of economic activities. Finally, a seventh dimension, titled Political Urban Quality of life, refers to the city policies which support the concept of urban quality of life and the extent to which these policies are implemented.

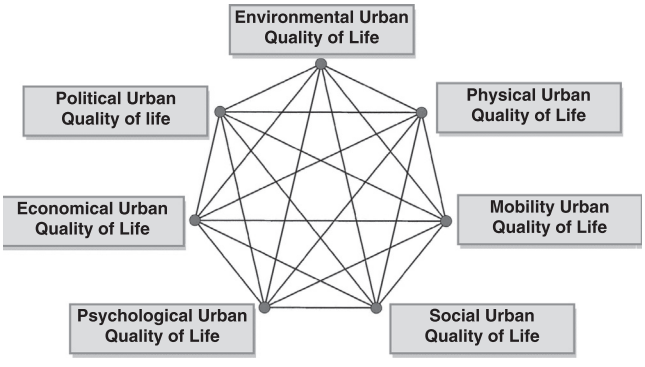

Fig. 1 Urban quality of life dimensions – Heptagon Shape (the researcher, 2012).

Contemporary urban design approaches and quality of life

Most of new urban planning theories and approaches appeared in the late twentieth-century, such as New Urbanism, Smart Growth, Urban Village and Principles of Intelligent Urbanism, etc., in order to develop communities that serve successfully the needs of those who live and work and to control the urban sprawl while enhancing urban quality of life. This part will analyze different contemporary urban planning theories and approaches that look for enhancing the quality of life through a set of principles in order to deduce the urban quality of life principles.

These new urban planning approaches borrow liberally from the best of earlier work. They also break new ground by blending contemporary and traditional design principles. They advocate a return to urban design principles of pre-automotive times. But the automobile is a fact of life, and the low-density lifestyles that are both cause and effect of auto-dependence clearly appeal to most new cities.

New Urbanism

The New Urbanism, also called Neotraditional Design, is an urban design movement that developed in the late 1980s, it inspires its concepts from the traditional town and neighborhood design (TND). Its main goal is to create buildings, neighborhoods, and regions that provide a high quality of life for all residents, while protecting the natural environment. The organizing body for New Urbanism is the Congress for the New Urbanism, founded in 1993. Its foundational text is the *Charter of the New Urbanism*. The New Urbanism offered a set of principles that addressed land use, transportation, street network, public spaces, walkability, mixed housing types, identity of place, and ecological concerns and offered a guide of alternatives to urban sprawl [19].

Smart Growth

Smart Growth is a relatively recent urban planning and transportation theory. It shares principles with contemporaneous movements identified by the terms new urbanism and sustainable development. According to the EPA (Environmental Protection Agency), Smart Growth is "development that serves the economy, the community, and the environment. It changes the terms of the development debate away from the traditional growth/no growth question to how and where should new development be accommodated" [20]. Smart Growth becomes now part of the lexicon of planners, policy makers, and almost everyone with an interest in urban issues.

Table 1 Urban quality of life Vs urban planning theories and approaches.

	New Urbanism	Smart Growth	Urban Village	Intelligent Urbanism
Environmental	No principles dealing directly with environmental issues.	Preserve open space and critical environment areas. Strengthen and direct development toward existing communities.	Sustainability.	Balance with nature. Efficiency. Appropriate technology.
Physical	Mixed land use. Compact neighborhood. Eco-building.	Mixed land use. Adopt compact building patterns and efficient infrastructure design.	Mixed-use and diversity. Increased density. Traditional neighborhood structure.	*No principles dealing directly with physical issues.*
Mobility	Pedestrian and transit friendly neighborhood. Fine network of interconnecting streets. Hierarchy of streets networks.	Create walkable neighborhoods. Provide a variety of transportation choices.	Walkability. Connectivity. Smart transportation.	Balanced movement.
Social	Provide civic building and public gathering places. Provide a range of parks. Create a range of housing types. Reinforcing a safe and secure environment.	Encourage community and stakeholder collaboration. Create a range of housing opportunities and choices.	Mixed housing.	Conviviality. Human scale. Opportunity matrix.
Psychological	Architecture and landscape should be linked to context. Preserve historic areas.	Foster distinctive, attractive communities with a sense of place.	Quality architecture and urban design. Quality of life.	Balance with tradition.
Economical	*No principles dealing directly with economic issues.*	*No principles dealing directly with economic issues.*	No principles dealing directly with economic issues.	No principles dealing directly with economic issues.
Political	Control evolution	Make development decisions predictable, fair and cost effective.	No principles dealing directly with political issues.	Regional integration. Institutional integrity.

Smart Growth goals are to achieve a unique sense of community and place; expand the range of transportation, employment, and housing choices; equitably distribute the costs and benefits of development; preserve and enhance natural and cultural resources; promote public health, economic vitality, and social equity; and improve quality of life [21].

Urban Village

The concept of the Urban Village was first promoted by the Urban Villages Group in the late 1980s as a means to achieve more human scale, mixed-use and well-designed places [22]. The term Urban Village has since entered the planning discourse, and a number of developments known as Urban Villages have appeared across UK. Urban Village ideals have been applied to new greenfield developments, as well as brownfield developments and urban renewal projects. The concept has been widely adopted in many countries and used by both government development agencies as well as private enterprise as a guiding concept for many projects.

The Urban Village is a concept of a settlement that is small enough to create a community, but big enough to maintain a reasonable cross section of facilities. Urban Villages are seen to provide an alternative to recent patterns of urban development in many cities. They are generally purported to reduce car reliance and promote cycling, walking and transit use; provide a high level of self containment (people working, recreating and living in the same area); help facilitate strong community institutions and interaction.

On the other hand, the objectives of Urban Villages are often criticized as unrealistic because they ignore broader social and economic realities. The ability to create self-contained villages is questionable as employment and activity patterns continue to become more complex. The viability of creating a variety of employment and activity within an area with a small population base can also be questioned [23].

Principles of Intelligent Urbanism (PIU)

The PIU emerged from several decades of urban planning practice by Christopher Benninger in the Indian subcontinent and Southeast Asia. Principles of Intelligent Urbanism (PIU) is a theory of urban planning composed of a set of ten axioms intended to guide the formulation of city plans and urban designs. PIU acts as a consensual charter around which constructive debate over actual decisions can be evaluated and confirmed [24].

Principles of Intelligent Urbanism (PIU) are intended to reconcile and integrate diverse urban planning and management concerns. Their ten axioms include environmental sustainability, heritage conservation, appropriate technology, infrastructure efficiency, placemaking, ''Social Access,'' transit oriented development, regional integration, human scale, and institutional integrity.

Urban quality of life Vs urban planning theories and approaches

This part tries to carry out a matrix which will point out the relationship between urban planning theories and approaches principles previously discussed and the seven dimensions of urban quality of life as shown in Table 1. This matrix will represent the departure point for deducing principles of urban quality of life.

It is obvious that there are some gaps pointed out by this matrix, as it is clear for example for the economical dimension. Although these gaps reflect the lack of principles that deal directly with the economical dimension, this does not mean that such urban planning approaches or theories have not considered this dimension, but they address this dimension indirectly as most of those urban planning approaches and theories principles have a direct effect on economical issue. For example, the principle of mixed land uses that outcrop in the most of approaches has a positive effect on economic issues.

Conclusion

Urban quality of life is a concept that has the challenge to solve the problems of urban areas, to control urban sprawl and to prevent environmental deterioration. It has the objective to restore existing urban areas and control the development of new communities.

This paper tried to deduce urban quality of life principles that enhance the quality of life, ensure the sustainability of the neighborhood, and try to solve problems facing the developed urban areas and new developments. The study classified urban quality of life into seven dimensions: environmental, physical, mobility, social, psychological, economical and political. These main dimensions are divided into thirty basic principles that can be applied in various combinations to achieve quality of life for communities. These seven dimensions are studied theoretically and can be subjected to an applied study.

Environmental urban quality of life

1. Promote the access to clean air, water, land and non toxic materials; in order to protect people and maintain biodiversity.
2. Preserve resources and minimize energy demand by taking energy saving technologies.
3. Give the ability to enjoy natural landscape by providing a range of green areas distributed within the neighborhood.
4. Provide appropriate ways to control and manage wastes.

Physical urban quality of life

5. Neighborhood should be compact, pedestrian friendly and mixed use.
6. Provide the access to adequate services and facilities that fulfill people's needs.
7. Provide the access to adequate eco-buildings and housings that fulfill people's needs and national building code.
8. Provide well-defined streets and open spaces by a well-structured building layout.
9. Provide a hierarchy of complete street networks based on pedestrian and vehicle load.
10. Take into account projected management, maintenance and repair policies to ensure the sustainability of neighborhood.

Mobility urban quality of life

11. Provide alternatives to using car in order to reduce traffic load, minimize air pollution and conserve energy.
12. Provide activities of daily living and transit stops within walking distance to allow independence to elderly, young and who do not drive.
13. Provide fine network interconnecting streets to encourage walking.
14. Provide streets friendly with pedestrian, cycle and vehicle.

Social urban quality of life

15. Promote social justice and equity by providing equal access to affordable housing, economic activities, services and facilities.
16. Remove all barriers that reduce the participation in daily life of certain social groups, such as those with disabilities, women, children and elderly.
17. Design of streets and buildings should reinforce safe environments.
18. Promote social integration by providing a broad range of housing types, tenure types and prices levels.
19. Promote good relationships and daily interaction between people by providing civic buildings and public gathering places.
20. Promote social participation in all the project processes.
21. Promote the liveablilty of streets by providing safe, comfortable, interesting streets and squares to the pedestrian.
22. Promote neighborhood stability by ensuring secure tenure.

Psychological urban quality of life

23. Promote community identity by preserving heritage and historic remains, making architecture and landscape responding to their context.
24. Give the opportunity for people to have a place of their own by giving the ability to personalize the space.
25. Promote a pleasing milieu by enhancing urban-esthetic character of the built environment.

Economical urban quality of life

26. Provide job opportunities and promote local business by supporting locally owned stores and business as well as by encouraging mixed use development.
27. Minimize cost of living by promoting the access to affordable housing, services and facilities.

Political urban quality of life

28. Promote integrated urban governance.
29. Provide codes and legislation to control evolution.
30. Promote the community involvement in council decision making.

The suggested dimensions and principles of urban quality of life aim to guide and assist public policy makers, urban planners, and designers to raise the urban quality of life of the neighborhoods and communities.

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