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Assessment of the quality of life in cities

Environmental conditions and mobility

1. Preface

Researchers from Austria, Czech Republic, Italy, the Netherlands, and Sweden collaborate in the EU sponsored project »Asses implementations in the frame of the Cities of Tomorrow« (ASI). ASI is centered on quality of life issues and the way they are dealt with in projects aiming to promote sustainable transport. In general, these issues tend to be overlooked by researchers, as they are difficult to measure or quantify. The main objective of this project is to examine whether and how policy makers take into account quality of life effects when designing and implementing transport policies, by reviewing policy implementations in cities that participated in the Cities of Tomorrow programme. Based on this, development of an instrument that will enable decision-makers to better address quality of life issues in mobility projects is prepared, in order to secure public acceptance and promote user behaviour changes.

The project follows holistic approach to sustainability; special emphasis is given to issues of sustainable transport. This reflects the facts that the urban structure directly predetermines the transport system and that the mobility of people and goods has a central impact on the quality of urban environment. Therefore the project clamours for compact, space-saving settlement structure interrelated with an environmentally compatible transport system. Its scientific orientation is determined by the objectives of the EU policies and its inspiration sources could be found also in ecological and architectural movements. Similarly to their typical approach, the project Ecocity intends to realise its vision of sustainable city through planning of an ideal physical structure within a spatially limited model area.

2. Quality of life – a historical perspective

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 the »life« which forms the moral end«. (in Smith, 2000).

This was then followed by a surge, in the 1930s, when researchers started to show a real interest in the subject and

several attempts were made to define, investigate and measure the concept (Massam, 2002). Quality of life also emerged on the political agenda. Edgar Hoover, for instance, was behind Ogburns two-volume report on recent social trends. A report that was partially instrumental in a movement dealing with social indicators and quality of life (Massam, 2002). To start with the aforementioned scientist would mainly be concerned with measuring material wealth as an indicator of quality of life. However, during the depression a Baltimore journalist published a series of articles that presented the ratings of quality of life (QoL) in cities and states. His ratings included objective factors such as: »income, education, crime rates, housing prices and infant mortality« but also subjective one's such as people's feelings about their neighborhood and the environment (Mitra, 2003).

In the 1950s two economists, namely Ordway (1953) and Osborn (1954), used the term in an argument against unlimited economic growth. Four years later Galbraith published his book »The Affluent Society« followed by »The Industrial State« in 1967. In these books he discussed the consequences of growth and he criticized the economic ideology behind the expansion of industry, he states: »What counts is not the quantity of our goods but the quality of life« (in Snoek, 2000). In the second half of the twentieth century scientists came to realise that QoL included more than material wealth thus other factors such as health, education, personal freedom, enjoyment and welfare were included.

In the 1970s the general question on the agenda was »how can you live happily and well?« (Leitlinie Dermatologie/Lebensqualität in dermatologischen Studien, 1998). A question, which caused research in the area to flourish. In addition to the above Massam (2002) added that it was the advancement within the area of computer science, which encouraged the movement to blossom and he also, quotes the launch of a specialised journal »The Social Indicator Research« as an important milestone. By the 1990s some large research centres had started to study the quality of life of its inhabitants. For instance, in 1994 a research centre in Denmark was opened to study the lives of 10.000+ Danish people. During the same period, on the other side of the Atlantic Ocean, in Canada the Ministry of Health funded a survey that studied the quality of life on a national level. At the beginning of the new Millennium Smith concluded in his review of the literature that »Quality of life is currently underpinning a significant proportion of new social science research« (Smith, 2000).

3. Quality of life – a definition

Although the notion of quality of life (QoL) has been the focus of numerous studies a consensus as to how it should be defined has not been reached. Several authors have pointed out that there are numerous definitions but no universally accepted one (Ormel, Lindenberg, Steverink, and Vonkorff, 1997; Lim, Yuen, and Low, 1999; Smith, 2000; Snoek, 2000; Wunsch and Risser, 2002).

Some definitions are very general like Dalkey and Rourke who offered this broad definition: »a person's sense of well-being, his satisfaction or dissatisfaction with life, or his happiness or unhappiness« (in Ferrans and Powers, 1985). Or Martin and his colleagues who stated that it describes the:

»individual's overall satisfaction with life and their general personal well-being«. In these definitions »well-being« and »satisfaction« are used, which is not unusual. Quality of life, well-being, satisfaction but also health status, happiness and self-esteem are often used interchangeably (Felce and Perry, 1995; Lim, Yuen and Low, 1999; Snoek, 2000; Ranzijn and Luszcz, 2000). This is something, which only further complicates the matter (Felce and Perry, 1995). To use personal satisfaction as synonymous with quality of life would according to the same authors be most unfortunate, especially if no consideration is given to the persons life condition: »... Expressions of satisfaction are themselves relative to the individual's temperament and the circumstances and experiences that have shaped their frame of reference«. They strongly argue that a definition needs to assess both objective and subjective circumstances, or as Emerson (1985) defines quality of life: »as the satisfaction of an individual's values, goals and needs through the actualisation of his/her abilities or lifestyle« (in Felce and Perry, 1995). The need to include life conditions was also emphasised by Clark (2000) who suggests »that quality of life for an individual is affected significantly by his or her social environment« (in Massam, 2002).

However, despite the lack of consensus it is possible to discern some form of agreement. For instance, most researchers would argue that it is a multidimensional construct (Cummins, 1999; Snoek, 2000; Hagerty, Cummins, Ferriss, Land, Michalos, Peterson, Sharpe, Sirgy and Vogel, 2001) and that it reflects personal values (Snoek, 2000). It can therefore be said to reflect how well individual needs are fulfilled in various fields of life (Wunsch and Risser 2002). Three different dimensions have been proposed; physical, psychical and social (Finlay, 1997; Snoek, 2000; www.uni-duesseldorf.de). The social dimension is further divided into a public and private domain. In addition to these three dimensions most researchers would argue that the definition should include both objective and subjective elements (Cummins, 1999; Ranzijn, and Luszcz, 2000; Hagerty, et al., 2001).

The dimensions can be illustrated as follows:

- *Physical* – health status;
- *Psychical* – self mastery, self-efficacy, love, satisfaction, happiness, morale, self-esteem, perceived control over life, social comparisons, expectations of life, beliefs, aspirations;
- *Social (private)* – social network, social support, level of income, education, job. *Social (public)* – community, climate, social security, quality of housing, pollution, aesthetic surroundings, traffic, transport, incidence of crime, equality, equity.

The three dimensions interact with each other and if one domain changes then the others will follow. For instance, studies have found that social interactions result in improved self-esteem and personal and social competencies (Lloyd, and Auld, 2002). Furthermore, a high self-esteem might affect the person's aspirations and increase his/her perceived control over life. Thus, one change might precipitate change in other areas as well. Diener (2000) also pointed out that QoL is judged in comparison to certain standards. These standards are coloured by our aspirations, by how we felt yesterday and by our perception of others.

4. Quality of life – indicators

As we have understood, both objective and subjective criteria can be used when trying to measure quality of life. Objectives ones represent external life conditions such as economical and technical factors and subjective ones represent the individual's appraisal of these conditions. Nowadays most would agree that objective and subjective indicators should be combined (Glatzer, 1990; Ormel et al., 1997; Baa-ske and Sulzbacher 1997; Felce and Perry, 1995; Cummins 1999; Cummins, 2000; Hagerty et al., 2001; Cozens, 2002; Kim and Cho, 2003). Some would even go so far as to say that this is a common sense view (Cummins, 2000). However, not everybody would agree with this and some studies have dismissed the individual perception of life and only measured objective variables. One important reason for this is that subjective variables are seen as »soft« measures that are difficult to assess and interpret (Lloyd and Auld, 2002). Besleme, Maser and Swain (1999) reported that they tried to introduce subjective measures but that the business community were opposed to this arguing that it was too »touchy-feely«, something which they believed had no place in the development process. One example of a study where only objective indicators were used is Giannias (1998) who drew a link between quality of life and structural characteristics of the house: »The choice of a house is equivalent to a choice of a quality of life value«. Variables included in the index could be the number of rooms, age of the house but also factors related to site and urban attributes (i.e. annual temperature of a city, air pollution and crime rate). This approach is not uncommon and other studies have included some, or all, of the above variables (e.g. Blomquist, 1985; 1988; Roback, 1982; 1988) (in Giannias, 1998).

Another example is the work carried out by local government in Korea who are making increased efforts to measure QoL by the sole use of objective indicators such as crime rates, income and employment rate (in Kim, and Cho, 2003).

On the other extreme, objective criteria's are seen to be largely irrelevant. Andrews and Withey (1976) dismissed the distinction between O and S indicators. They would argue that the only way to experience the world is through our senses and therefore the so-called »objective« measure is a product of the same:

»It has become common to divide social indicators into two types – objective and subjective. We believe, however, that this classification is neither clear nor very useful. Even birth and death and what defines human life are currently matters of legal, medical, and doctrinaire dispute. Presumably objective indicators of these matters turn out to involve subjective judgements. Conversely, it can be argued that many subjective indicators (such as people's evaluation of their lives) provide rather direct and objective measurements of what they intend to measure«. (Andrews and Withey, 1976). Researchers in the area of QoL would undoubtedly agree that objective conditions such as income, crime rate and so forth affect person's attitudes towards his/her quality of life. So the question is if objective criteria also help to explain QoL over and above the individual perception of the same.

Studies looking at the relationship between objective and subjective measures report a correlation coefficients in the range from 0.04 to 0.57. This would then suggest that they measure rather different aspects of quality of life (Fakhoury, and Priebe, 2002). A number of other studies confirm this. For instance, the association between objective health status

and subjective life quality is very weak (Snoek, 2000; Salyer, Flattery, Joyner, and Elswick, 2003). Cancer patients do not report lower level of well-being than a healthy control group or people. The same has been found with regard to people with severe disabilities a group who were not more dissatisfied with their health, some would even argue that they were completely satisfied (Snoek, 2000). Rate of crime and subjective safety is another example where the relationship is very weak (Wolfgang and Sulzbacher, 1997). Expressions of satisfaction also failed to differentiate between individuals whose living environment differed markedly on many objective characteristics (from hospital wards to community housing) (Holland, 1990: In Felce and Perry, 1995). The poor link between living conditions and subjective well-being was also confirmed by Baier (1992) and Frankenhaeuser (1976). In two further studies comparing economically deprived areas to more affluent regions the result showed no difference in how the people perceived their level of satisfaction (Wilkening and McGranaham, 1978; and Amos, et al., 1982). Two possible explanations were offered by Smith, (2000): One that it would be an effect of social comparison, individuals within one community did not see their lives as different from others, the other was that they accepted their own position.

Edgerton (1990) argued that significant changes in a persons living situation might also change QoL but that the effect is only temporary. Shortly afterwards the level would be the same as before. It has been suggested that individuals adapt to changes in their lives by changing their expectation and goals (Diener, 2000). In the case of people with health problems an adaptation takes place to their changing circumstances, trying to make the best of their lives (Snoek, 2000).

Other studies have also shown that the relationship between objective and subjective QoL is non-linear. Or as Durning (1993) pointed out »People living in the 1990s are on average four-and-a-half times richer than their great-grandparents were at the turn of the century, but they aren't four-and-a-half times happier«. Over and above a certain level an increase in wealth will have little or no effect on QoL (Cummins, 2000).

So the old notion that the quality of life would continue to improve with increasing material wealth has to be abandoned. Indeed, studies have found that when people's basic needs are guaranteed they will start to develop others »like demands for greater influence and participation, for awareness of one's role in the community, for a sense of purpose, opportunities for meaningful work and for the realisation of personal talents and abilities« (Frankenhaeuser, 1976).

It is perhaps not surprising that the relationship between objective and subjective indicators is very weak but that does not necessarily mean that one is more important than the other. Lehman (1988), for instance, used the poor relationship as an indication that both should be assessed. Only then, he would argue, would we be able to provide a full picture of QoL (in Fakhoury and Priebe, 2002).

According to Lim, et. al. (1999) the main advantage of using objective indicators is that they can be quantified, or as they put it: »Objective measures comprise tangible, objectively verifiable aspects of living«.

Having said that they would also argue that without subjective indicators the results might not be very useful since they fail to capture people's experience of life. Lim, et. al.

(1999) concluded that indicators of QoL should at least include the respondent's assessment of their lives such as: health, housing, education, recreation, arts and culture, families and community. Diener and Suth (1997) also pointed out that subjective and objective indicators provide alternative views of societal quality and will therefore be a more correct measure of the same (In Lloyd and Auld, 2002).

Thus individuals own experience of life and the environment in which life is experienced contribute to a person's quality of life. Rogerson (1999) summarised this into two arenas; one material and one personal, see figure 1.

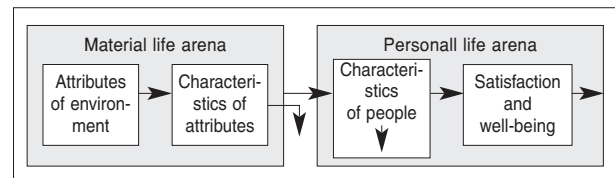


Figure 1: A conceptual view of quality of life

5. Environmental quality of life

Figure 1 shows that QoL involves two elements: an identification of the preferences and an evaluation of the same. The model recognizes that people's tastes, aspirations and value systems vary. The different letter in the figure describes different forms of assessment. A stands for studies assessing the material life arena; B the individual characteristics of people and C the cognitive and affective reactions to life itself.

To include objective indicators makes it possible to compare and contrast the QoL of collective groups and locate those groups within a spatial reference (e.g. nations, regions, cities and neighborhoods). Felce and Perry (1995) argued that aggregated data can help in establishing whether quality of life is evenly distributed or narrowly clustered, or to put it differently, it provides us with a standard of reference. They would even go so far as to say that:

»A definition of quality of life that ignores objective assessment of life conditions may, therefore, not provide an adequate safeguard for the best interests of vulnerable and disadvantaged people. Expressions of satisfaction may simply reflect the intractability of conditions commonly experienced by those with limited skills, autonomy, and attachment to the mainstream society and its economy«. (Felce and Perry, 1995).

This would then be more sensitive to the reported level of satisfaction with his/her living conditions while at the same time maintaining a more independent perspective on those circumstances.

It could therefore be concluded that the relationship between objective and subjective indicators are very weak and that the latter are a better predictor of QoL than the first. Nevertheless, it would be wrong to conclude that objective measures are surplus to requirement. Accordingly it becomes important to distinguish between subjective and objective measure and as Cummins (2000) pointed out this is something that: »lies at the heart of an integrated, a comprehensive understanding to the construct«.

According to a new survey of the quality of the life enjoyed by people in 215 countries, Swiss cities rank as the most liveable. Zurich is ranked as the best city in the world to live

and Geneva is second. Bern, the capital, is sixth. They are probably the most fortunate people on the planet. Healthy, wealthy, and, thanks to an outstanding education system, wise. They enjoy a life that most can only dream of. For ease of reference we commonly refer to them as the Swiss. The findings are less good for London, which is ranked 35th, behind Dublin, Oslo and Nuremberg. Unsurprisingly, researchers from Mercer Human Resource Consulting concluded the Baghdad, with its security problems and shattered infrastructure, has the lowest quality of life in world... Cities in Europe, New Zealand, Australia continued to dominate the top of the rankings. The analysis was based on an evolution of 39 quality of life criteria for each city... Prague is the best in Eastern Europe followed by Ljubljana and Budapest.

6. Sustainable transportation in cities

Not surprisingly sustainable development has also focused on our transportation system trying to include it under the same umbrella. The European Union Council of Ministers of Transport elaborated on this, arguing that it should be defined as follows:

Allows the basic access and development needs of individuals, companies and society to be met safely and in a matter consistent with human and ecosystem health, and promotes equity within and between successive generations.

Is affordable, operates fairly and efficiently, offers a choice of transport mode, and supports a competitive economy, as well as balanced regional development.

Limit emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimising the impact on the use of land and the generation of noise (in TDM, 2003).

To be able to reach important destinations is one among other factors that help to contribute to QoL of any community (Roseland, 1997). This can also be described in short by the word mobility. Mobility has been regarded as a cardinal urban value. It is sometimes related to self-sufficiency or independence (Marcellini, Pavan, Ulisse, 1989; Tacken, Marcellini, Mollenkopf, Ruoppila, 1999; Kulikowsky, Likaszewicz, Wloskowitz, Radecki, Kazebuski and Buczkowski, 2001) to be active (Mollenkopf, 1997) and to be able to enjoy a good life (Hwang, Nayak and Newport, 1999). Nowadays most journeys are done by car, which is not sustainable in the long term. Eimsbüttel (1999) argued that cars do not have to be prohibited but they should not have priority and »life quality should be guaranteed by other means of transport«. Vamboterdal (1997) stated that we are now faced with the most important challenges, namely providing everybody with efficient and fast means of transport suitable to everybody's needs.

The Transportation Research Board (2001) listed four reasons why individuals and communities would value a choice of different forms of transportation:

- To help achieve equity goals. A lack of transportation choice limits the personal and economic opportunities available to people who are physically, economically, or socially disadvantaged. Often, such individuals have less access (or less reliable access) to an automobile, and so

may face barriers to mobility in automobile-dependent communities. For example, in such communities, non-drivers may have difficulty attending school or working.

- To serve as a back-up option for those who can drive. People who do not habitually use an alternative mode may value its availability at some point in the future or in the case of an emergency. Most people can expect to go through periods when they must rely on alternative modes of transportation, due to age, physical disability, financial constraints, vehicle failures, or major disasters that limit automobile use.
- To increase transportation system efficiency. Use of alternative modes can help achieve certain transportation demand management (TDM) objectives, including reduced traffic congestion, facility cost savings, and environmental quality.
- To increase liveability. Many people enjoy using alternative modes such as walking and bicycling, or riding the bus, and they value living in or visiting a community where these activities are safe, pleasant, and readily available.

In this list the achievement of equity is related to accessibility, another concept closely linked to QoL. However, this should not be confused to mean mobility. The Transportation Research Board (2001) defined accessibility and mobility as follows:

»Accessibility relates to the ease with which specific locations or activities can be reached; mobility refers to a person's ability to move about«.

Thus accessibility is affected by the range of transportation choices available but also to travel time, safety and cost. In the local context it describes how easy it is to reach different destination by the use of non-motorized modes of travel. Burden (2001) added that it should be possible to reach most facilities needed within a household in 5 minutes and 10 minutes cross the area. Fremantle (a city in Australia) can be used as an example of a city that is accessible and has managed to be built around people rather than cars. In a recent survey people were asked to assess this city and the results showed that 69 percent rated it as »very desirable«. Yiftachel and Hedgcock. (1993) argued that this was because the center had not grown too much and could offer a range of recreational activities close to one another including: street cafés, markets, shopping, art galleries, restaurants and residential accommodation.

The enormous increase of traffic in the Czech and other central European towns means more mobility for its inhabitants and higher intensity of residential distribution of functions, at the same time however it also created a series of conflicting situations in people's every day life, it disturbed their living environment, it disturbed the towns as entities and their working ability.

The experience from the control of traffic and from planning the development of towns demonstrate that ensuring the harmony between the traffic and the town represents one of the most serious problems of contemporary communal policy. This problem involves two levels of treatment. On the social level it is a question the social, economic and cultural problems of the process of town planning, of the possibility to control this process and in this way also of its influencing the growth of towns. Further more it is a question of value orientation in the approach of society to economic development, to protection and creation of the living environment and to the development of traffic. On the level of control of the operation and development of the town it is then a question of selecting the optimum traffic system, of ensuring the safe traffic and of removing the negative influences of traffic

on the urban environment. It is especially possible in case of ensuring the harmony between the town structure and the traffic network, between a good organization of the operational exploitation and the preservation of an acceptable level of urban environment on the given territory.

7. Improving the quality of life of citizens

In some cities it is only the able bodied with access to a car that are free to choice, others face an inaccessible transport system. Morton (1995) pointed out the different problems an elderly pedestrian can experience. For them going out is a great challenge and the sheer volume of cars and its speed is very intimidating. In another study a number of indicators related to safety and accessibility were identified including: vehicular speed, pedestrian accidents, the quantity and quality of pavements, the number of services within walking distance and facilities for people with disabilities (PROMPT, 2003). It could therefore be argued that many quality of life and social equity goals remain to be fulfilled.

A number of projects, many of them funded by the European community, address this problem trying to improve the mobility for people who need special provision.

For example to improve the conditions for pedestrians and cyclists traffic calming has been introduced throughout Europe. Some projects suggest wider sidewalks (Mollaroli, 1997; Pillieri, 1999), improved lighting (Vegega and Levy, 2000), interconnected pedestrian paths (Mollaroli, 1997) and resting areas (Corazza and Martincigh, 2001). Walking can sometimes be very dangerous for the visually impaired. Different devices have therefore been developed to enable people with disabilities to be mobile. One device for the visually impaired is a radio beacon system, which alert the person when they reach a junction, entrances to shops, subways and so forth (Kulikowsky et al., 2001).

Researchers have also become aware of that public transport needs to be improved to also suit people with disabilities. This group often finds it difficult to enter buses thus low floor buses has been introduced to make them more accessible (Balschbach, 1997; Caiaffa and Tyler, 2001). The elderly needs more time to process the information and one way to solve this according to Hekstra (1999) would be a dynamic information system (Tacken, et al., 1999). A number of other projects have also tried to improve the information to people with disabilities (Waara and Ståhl, 2001; Tacken, et al., 1999). Service routes bringing bus services closer to the residents and call a ride are other solutions (Ståhl, 1997; Divieti, 1997; Busi and Ventura, 1997).

A great deal of studies focus on various needs trying to improve the conditions for its citizens. The needs resemble those already identified as promoting QoL but, in many cases, this is not acknowledged. Instead the reference to QoL is implicit. However, some studies include the concept in the description and sometimes the aim of the project is to improve the same. For example, four studies in this review made a link between independency/mobility and quality of life (Caon, 1999; Tacken et al., 1999; Mollenkopf, 1999; Kulikowsky et al., 2001;.) In the case of Kulkowsky et al., (2001) the target group was the blind, for Caon (1999) children and for Tacken et al., (1999) and Mollenkopf, (1999) it was the elderly. The focus of Pillieris (1999) study was to make commercial areas more suitable for pedestrians by improving both safety and comfort. An assessment of pedestrian flows was

carried out in order to evaluate the quality of the infrastructure. Wider sidewalks and urban furniture were suggested. They also concluded that: »few implementations in urban environment lead to remarkable positive changes in the weakest road users behaviour and as a consequence improvement of the quality of life«.

Nardi (1997) used the number of crashes as an indicator of QoL. For Lentini and Occhiuto (1991) QoL meant the promotion of a new culture which respected the environment, the need for human space and liveability. Other important factors mentioned in the report were the prevention of accidents and crime. The town also had to be made more accessible. They stressed the need to assess the relationship between mobility and life quality. In the study liveability was referred to as the existence of services including parking, pedestrian crossing and bus stops. Finally, The Bristol Local Transport Plan tried to improve the quality of life by taking the needs of people into account and to involve them in the decision making process (Albrechts and Verachtert, 2002).

8. Public participation in the community

The principles of sustainability and planning include comprehensive analysis that considers economic, social and environmental impacts. The information required to reach this goal needs to be based on a thorough understanding of how the various factors interact, what the goals are and its long term effect. As previously pointed out one of the goals is to meet the needs of both present and future generations. Therefore an understanding of the problem should also consider the needs and interest of citizens. One critical element to achieve this goal is participation and according to an OECD report »Participation can be the key to community acceptance and ownership of change, and this is a vital process for achieving sustainability in cities«. (OECD, 1996). Burden (2001) also pointed out that the public expects to be part in shaping different plans and projects. Other reasons for involving the public are (cf. Risser and Lehner, 1997):

Participation reflects a basic democratic principle: Within the notion of democracy lies participation. In order to achieve this the process needs to be transparent and open for discussions. This could then serve two purposes, one is to inform the other is to receive feedback.

It helps to avoid conflict: a continues exchange of information, and a willingness to alter priorities in the face of changed circumstances, help to convince the public of the credibility of the system which in turn helps to avoid •

conflicts. Participation can be seen as a down-to earth source of practical assistance: Something that is often forgotten is that the population can provide some valuable information as a complement to what practitioner and experts already know.

Politicians and decision makers have started to realise that public involvement is often very important factor but sometimes citizens are involved too late. It is fairly usual that formal decisions are taken at the level of town and country planning. At this stage the needs of the residents are not considered, or at least very little. It is not until the following step dealing with the location of buildings or other land use when their voices can be heard, if at all. This can be a real problem since mistakes already made can be difficult to correct. Different projects have shown that letting people in

the community participate actively can be very helpful when it comes to identifying the problem and giving feedback when it comes to drafting and implementing the project.

In one project, which aimed to improve the safety outside a school, parents, teachers and children were involved. Children were asked to draw maps and point out the most dangerous places (Passigato, 1997). In another project the aim was to improve the social life and living conditions for elderly people. With the help of the people in the community it was possible to formulate a list of problems, a document that was the starting point before the re-design started (AA.VV, 2000). Vamboterdal (1997) would argue that public participation in the planning process is fundamental. For the planners in Donostia-San Sebastian this was also crucial since it guaranteed success (Busi and Pezzagno, 1999). In some projects the public are also involved in the draft of the proposal and the implementation phase. In a project called ROM-PROJECT GHENT CANAL ZONE the inhabitants were involved in three different stages:

Consultation with regards to problem identification: questionnaires were given to inhabitants selected at random from the neighbourhoods

Consultation with regards to draft proposals for plans/programs: in each residential quarter of the area, a neighbourhood meeting was held to discuss the proposals. Leaflets and ROM newspapers were used to announce the meetings.

Consultation and co-decision-making in the implementation phase and future planning processes. (Albrechts and Verachtert, 2002).

It could therefore be argued that the chances of success is greater if the public are involved but there are also other reasons which has a strong link to QoL namely developing a strong bond to their community (Transportation Research Board, 1998). Cochrun (1994) defined this as a »sense of community« in which:

»People who have a strong sense of community feel like they belong in their neighbourhoods, they believe they exert some control over what happens in their neighbourhoods while also feeling influenced by what happens in them, and they believe that their needs can be met through the collective capabilities of their neighbourhoods.«. (Transportation Research Board, 1998)

In the above quotation a number of needs, earlier identified as enhancing QoL, include; being able to exert some control, to feel needed and the interaction with others. Thus public participation serves many important purposes which helps to increase QoL.

9. Conclusion

Quality of life is a concept that once generated a great deal of interest – even as far back as Aristotle and Plato – and now does once again. What have changed are of course the methods used when studying the concept.

To start with QoL was measured using only objective indicators such as income, climate, mortality, crime rate. Gradually scientist became increasingly dissatisfied arguing that objective indicators failed to capture the complexity of human life. This then led on to including subjective variables measuring an individual's level of satisfaction. The concept itself has been defined in many ways although most would agree that it is multidimensional and that it refers to the fulfillment

of needs. How to measure QoL has been widely debated and there is still a lack of standardized measures. Despite this in the last twenty years progress has been made and some form of agreement can be seen. The questions asked should of course be of relevance to the target group and in order to achieve this goal a bottom up rather than a top down approach is sometimes suggested. The questions also need to be sensitive to change and measure both positive and negative impact. Most researchers agree that the different questions asked should be combined into discrete domains. This will then help to define different areas of life. With regard to the individuals immediate environment domains such as: family and friends, health, safety, security, freedom, occupation and standard of living are many times included. If the purpose of the study is to look at community life then factors such as: safety, transportation choice, accessibility, scenery, environmental quality, equity and public participation can be added.

The order of importance is an area that frequently has been discussed and some have proposed that family and friends are the most important factors others that it is health. The conclusion might well be that we will never arrive at a specified order because of individual variation. This report showed that the priorities are different between young and old people, men and women, married and unmarried, low income earners and high income earners, people with higher education and people without and the list can probably be even longer. Thus any measure of QoL has to consider individual differences but also social and economic circumstances. It would be wrong to assume that the above groups are distinct since variations within groups also exist.

QoL is sometimes related to another concept namely sustainable development. The definition of the latter states that individual needs should be considered and satisfied but it also adds a more long-term view by focusing on the need of both present and future generations. A great deal of work has been done in the area, both on a theoretical and practical basis. Most agree with that mobility is important but that the sole use of the car is not sustainable. Therefore transportation choice is looked at more deeply both when it comes to modes of transport but also how to provide for people with different needs. Researchers have also come to realise that a community can only satisfy the public's needs if the latter are involved in the decision making process. A number of studies present some very interesting results where the community has been involved in the whole process. Some, but not all, decision makers have also started to understand that the success of a project relies on public participation, they do not only help to identify the problems but also to formulate solutions. In addition to this it could be argued that public participation helps to enhance QoL since a number of important needs have the potential to be fulfilled, that is: being able to exert some control, to feel needed and the interaction with others.

In this review of the literature it was not hard to find research projects trying to improve the quality of life of its citizens. Some of these reports use the word QoL but fail to both define and measure it. Others do not use the term in an explicit way but the focus is closely linked to different needs and how they could be satisfied. To allow basic access for both able and disabled people, to reduce emissions and noise, to increase safety and security are some of the areas addressed in these papers. In both cases it is assumed, implicitly, that the proposed implementation will

enhance QoL. The conclusion is therefore that this is a field that needs to take a closer look at QoL only then will we be able to monitor, predict and improve QoL.

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Roberto ROCCO

Towards a polycentric metropolis

Global strategies and unequal development in São Paulo

1. Introduction

This paper aims at describing current trends in urban transformation in São Paulo, the largest metropolis in South America. It presents evidence on the role of the public sector in promoting infrastructural adjustments in order to reinforce the role of the agglomeration as articulator of national and global flows of production, information, knowledge, finance and services. It introduces evidence that such strategies reinforce polycentricity, but also socio-spatial fragmentation, through selective investment in infrastructure in specific areas of the metropolis.

Our hypothesis is that, from a purely neo-classic economic point of view, global cities do not *need* to have homogenous development and equal access to urban networks and public services in order to promote economic growth. Economic growth is understood here as firms' increasing returns, therefore economic growth and social development are not necessarily synonyms. Economies of agglomeration can thrive in highly fragmented spaces. Moreover, differences in the provision and accessibility to services do not necessarily interfere in the role of cities as articulators of production and consumption. An »archipelago« of highly developed

centralities highly connected between themselves and between other »global places« may trigger economic growth, but might not bring comprehensive development. Moreover, differences in the provision of services and infrastructure may work as propellers of real estate appreciation, as comparative advantages are excessively concentrated in specific sites, creating areas highly prized by certain economic agents and maximizing returns in real estate development, reinforcing existing polycentric structures.

The distinction between growth and development is important in order to analyse public policies that allegedly promote both, while in reality stressing only the former.

2. The economic core of Brazil

São Paulo is a metropolis of superlatives. It is the largest urban agglomeration in South America, with roughly 18 million inhabitants (IBGE, Brazilian Institute of Geography and Statistics, 2005). According to Habitat-UN, it is one of the largest urban agglomerations in the world, after Tokyo, Mexico City and New York (UN, 2006)

The »Grande São Paulo« (Greater São Paulo Area) is a large metropolitan region located in the Brazilian federal state of São Paulo. The Metropolitan Area of São Paulo (MASP) is a politically recognized planning and administrative unit. It is the largest of 25 official Metropolitan Regions in Brazil. The MASP comprises 39 municipalities, with a total area of 8,051 km². The build-up area covers 2,139 km², stretching approximately 70-80 km in the East-West Axis and 50 km in the North-South axis.

The population density is not homogenous throughout the metropolis, but the average is 2,631 inhabitants/ km². The core municipality (São Paulo) has a density of approximately 7,171 inhabitants/ km².

The MASP is indisputably the financial and economic core of Brazil. The region's GDP is approximately 45% that of the federal state and 15% of that of the country (IBGE, 2005).

The region is home to one of the most diversified industrial complexes in Latin America. The high level of articulation between various industrial sectors and the highly advanced services sector is evident, especially in the automobile industry. The most important industrial sectors are chemicals, automobiles, food and drink industry, heavy machinery, publishing, electrics and plastics.

The service sector employs 51% of the working force, that is, more than 2 million workers. The main branches in the service sector are telecommunications, technical producer services, informatics, postal services and general producer services. São Paulo is also an international hub for advertising and marketing. Commercial activities employ more than 1 million workers and generate 8.8% of aggregate value in the state. Large shopping centres are a common feature in many municipalities of the MASP. The city of São Paulo alone has 41 large shopping malls that employ more than 100.000 persons (ABRASCE, 2006).

The MASP has one of the most comprehensive transportation systems in all Latin America. The region is connected to the seaside and to the vast South-American hinterland by numerous highways and train lines (for commodities only) and is served by three large airports.