

EUROPEAN UNION



Committee of the Regions

# Evaluating Quality of Life in European regions and cities



*Final Report*

Evaluating the Quality of Life in European regions and cities  
Theoretical conceptualisation, classical and innovative indicators

Group of experts:

**Max Craglia**

Dept. of Town & Regional Planning, University of Sheffield

**Lila Leontidou**

Dept. of Geography, University of the Aegean

**Giampaolo Nuvolati**

Istituto Superiore di Sociologia, University of Milan

**Jürgen Schweikart**

University of Applied Science Berlin

A great deal of additional information on the European Union is available on the Internet.  
It can be accessed through the Europa server (<http://europa.eu.int>).

Cataloguing data can be found at the end of this publication.

Luxembourg: Office for Official Publications of the European Communities, 1999

ISBN 92-828-7910-0

© European Communities, 1999

Reproduction is authorised provided the source is acknowledged.

*Printed in Belgium*

PRINTED ON WHITE CHLORINE-FREE PAPER

## **FOREWORD**

Since the unification of Europe, improving the quality of life of its citizens has been a major objective of the European Union: its aim is a constant betterment of living conditions, permanently underpinned by economic and social progress.

Over recent decades, quality of life - urban life especially - has become an ever more pressing issue and a central concern of local politics. Studies into people's quality of life are an important aid for local and regional decision-makers. Of key importance in this is the development of modern models for assessing quality of life which take into account social and economic change and technological progress.

By carrying out a comprehensive Urban Audit in 58 European cities and holding the European Urban Forum in Vienna in November 1998, the European Commission has given impetus to a dynamic urban policy at European level. The Committee of the Regions welcomes this and will be monitoring progress carefully.

The aim of this study is to examine how the concept of quality of life has evolved recently in line with the changes taking place in modern society and to develop new innovative indicators for evaluating quality of life. As such it is part of the European institutions' efforts to focus the Communities' view on developments in the quality of life in the EU's regions and cities.

**Prof. Dr. Manfred Dammeyer**  
President of the Committee of the Regions

## INTRODUCTION

In introducing this Study into the *Evaluation of quality of life in European regions and cities*, I would like to thank my colleagues on the Committee of the Regions Working Group for their invaluable insight which provided a steer through this most complex of issues.

Quality of life has risen to the top of the political agenda in recent years. Politicians at local, regional and national level have been actively pursuing policies to work towards a better quality of life for our citizens.

Cities and metropolitan regions represent the dominant centres of wealth and job creation in the EU. The challenge facing us as city managers is to create a socially inclusive, competitive society, which respects and protects the environment, and which can respond to the accelerating change of pace of our global world - to create a sustainable urban environment. And when we consider the sustainable development of our towns and cities, then quality of life issues must underpin our discussions.

The sustainable development agenda however requires integrated policies and actions, as recognized by the European Commission in its action plan for urban areas *Sustainable urban development in the EU* launched in November 1998. Being able to judge whether we are succeeding in our aims requires indicators - indicators that can be monitored to determine the success of our policies, particularly in respect of quality of life.

But quality of life means different things to different people, and covers a broad range of issues. What this Study has set out to do is to consider the validity of alternative indicators and questions whether they are useful in determining the impact on quality of life. The Study has attempted to capture a set of possible indicators that are particularly relevant in today's high-tech society.

As such it represents a fresh look at an old problem and one which I consider makes an important contribution to the current debates within the EU.

Sally Powell  
Committee of the Regions  
Vice-President Commission 4

## Contents

<b><u>Executive Summary</u></b>	11
<b><u>Introduction: Aims and structure of the project</u></b>	13
<b><u>1. Theoretical Issues</u></b>	14
1.1. Literature on the quality of life	14
1.2. The new frontiers	16
1.2.1. Post-modernism and the cultural shift in urban analysis	16
1.2.2. Quality of life and information and communication technologies	19
1.2.3. Emerging perspectives for analysing quality of life	23
<b><u>2. Methodological Issues</u></b>	26
2.1. Background issues	26
2.1.1. Introduction	26
2.1.2. Definition of cities	27
2.1.3. Data and studies on cities	29
2.2. Toward the individuation of indicators	30
2.2.1. General socio-economic development	31
2.2.2. Service availability	32
2.2.3. Internal disparities	35
2.2.4. Attractiveness	36
2.2.5. Technology and innovation potential	37
<b><u>3. Data analysis</u></b>	38
3.1. Choice of Indicators	38
3.2. Criteria for the selection of the cities analysed	39
3.3. Construction of indicators	42
3.3.1. General socio-economic development	42
3.3.2. Service availability	47
3.3.3. Internal disparities	49
3.3.4. Attractiveness	55
3.3.5. Technology and innovation potential	57
3.4. Future directions for the implementation of statistical data	58
3.4.1. Urban populations	58
3.4.2. Time	60
3.4.3. Technology	60
3.4.4. Directions for future research	60
<b><u>4. Conclusions</u></b>	62
<b><u>References</u></b>	64

### *Executive Summary*

*Recognising the increasingly complex challenges faced by urban areas in the EU, the Barcelona Conference identified the need to establish a system of local and regional indicators of the quality of life to inform policy-making. Thus the Committee of the Regions decided to contribute to this effort by commissioning a small scale study complementing those already undertaken by the Commission. The objectives of this study are:*

- 1. to define the more recent evolution of the concept of quality of life according to the transformations of modern society,*
- 2. to propose analytical axes for the study of the quality of life,*
- 3. to explore the data available for these axes,*
- 4. to identify new indicators useful to study these axes in greater depth,*
- 5. to evaluate existing data gaps to be filled for the construction of the more advanced indicators identified.*

*This report reviews the traditional measures of quality of life, and their theoretical underpinning. In doing so, it identifies three main issues that need attention: i) new challenges to the systems of cities posed by global economic forces, new patterns of production and consumption, and improved transportation, ii) the emergence of postmodernism as a powerful theoretical framework to analyse urban society, and iii) opportunities and threats created by the emergence of the Information Society.*

*With this in mind, the definition and operationalisation of "quality of life" need revising at this turn of the century with much greater concern for the complex interplay of the economic, social, and technology-driven forces operating in urban areas, and their impacts on different groups in society. The focus ought therefore to shift from analysing material and non-material human needs, towards the evaluation of the intersection between collective services and opportunities, on one side, and individual capabilities in terms of competence, information, participation, integration, and freedom of choice on the other. The report focuses in particular on socio-economic and technological indicators whilst recognising that environmental issues also play an important part in affecting the quality of life.*

*Cognisant of the existing limitations in comparable cross-national data, the report puts forward some pragmatic indicators that attempt to capture the complexities highlighted, and tests them on a few selected cities, with recommendations for future work. In particular more linkages are needed between subjective and objective indicators to study the interactions between the individual practices, and the collective resources available in contemporary society for improving living conditions.*

### Introduction: Aims and structure of the project

There is an increasing recognition of the need to develop coordinated responses within the European Union to the challenges faced by urban areas, as they contain over 80% of the EU population (see CEC, 1997a). Urban areas are both major generators of production, innovation and employment and foci of social deprivation and exclusion. Articulated policies need therefore to be developed to achieve the overall objectives of the EU, namely harmonious and balanced economic development, stable, non-inflationary sustainable growth, convergence of economic performance, high levels of employment and social security, improvement of the quality of life, economic and social coherence and solidarity among the Member States.

New challenges to urban areas are likely to result from future enlargements of the EU and redefinition of areas in need of assistance. With this in mind, the Barcelona Conference considered the need to establish a system of local and regional indicators of the quality of life to inform policy-making, and the Committee of the Regions decided to contribute to this effort by commissioning a small scale study complementing those already undertaken by the Commission.

The objectives of this study are:

1. to define the more recent evolution of the concept of quality of life according to the transformation of modern society,
2. to propose analytical axes for the study of the quality of life,
3. to explore the data available for these axes,
4. to identify new indicators useful to study in greater depth these axes,
5. to evaluate existing data gaps to be filled for the construction of the *more advanced* indicators identified.

The structure of the report is based on four sections. The first section focuses on the definition and conceptualisation of quality of life. It includes both a review of the literature and the traditional approaches used to define and measure the quality of life, and a discussion of the new challenges posed by shifts in paradigms and technological change.

Based on these considerations, this Section suggests that to study quality of life, from a wider perspective, it is necessary to consider five analytical dimensions regarding:

1. general socio-economic development of the urban community
2. services availability in the city
3. internal disparities between residents
4. attractiveness, competitiveness and possible conflict between commuters and residents
5. technology and innovation potential for improving the quality of life.

A sixth dimension, that of environmental influences on the quality of life is recognised as very important but is beyond the scope of this study. With this in mind, Section 2 focuses on the critical analysis, backed up with proposals, analysis of the available and desirable indicators to be used for each dimension, while Section 3 selects a few case-studies to test the indicators chosen based on the data currently available and



discusses emerging general interpretative patterns. Section 4 summarises the findings and concludes the report.

## 1. Theoretical issues

### 1.1. Literature on the quality of life

Quality of life is a very general and abstract concept that may be defined and measured in different ways, using objective and subjective indicators. There is no general agreement regarding the definition of quality of life (Lötscher 1985). In fact, what is striking if one analyses studies on the quality of life is the extent to which they differ from each other (Ruprecht 1993). Most studies adopt a large number of indicators on such issues as health, housing, work, leisure, and crime but in the final analysis what they reveal is that the quality of life cannot be objectified since the selection of indicators, their representation, and interpretation already imply some kind of judgment (Lötscher 1985).

There have been several attempts to converge toward a common definition of quality of life. In defining quality of life it is possible to start from the analysis of the scheme by Allardt (1976, 1981). He makes a distinction between objective and subjective living conditions and, in particular, considers four different dimensions: level of life, quality of life, satisfaction, and happiness. In particular,:

- *level* of life regards the so-called material needs in terms of health, food, employment, income and so on,
- *quality* of life regards the non-material life conditions, primarily in terms of quality of human relations, social and cultural integration, environment quality,
- *satisfaction* concerns the subjective perception of the level of life conditions, and
- *happiness* concerns the subjective perception of quality of life.

Andrews and Szalai (1980) and, more recently, Spanò (1989) present an alternative approach. In fact, they consider the quality of life as a mixture of all the elements mentioned above (material and non material, objective and subjective) due to the strong relationship between these dimensions. In particular, Zapf (1984) shows the interrelations between objective living conditions and subjectively perceived quality of life. If we narrow the manifestations of quality of life down to two, namely *good* and *bad*, the combination of subjective and objective quality of life results in a 2x2 matrix. All theoretical combinations could also occur in practice. So there is the possibility, e.g., that a person lives in good objective conditions but considers his/her subjectively perceived quality of life to be bad. Zapf calls this condition *dissonance*. The opposite case, i.e. a person considering his/her subjective living conditions to be good despite bad objective living conditions, Zapf calls *adaptation*. When objective conditions as well as subjective feeling are good we have *well-being*, when they are both bad we have *deprivation*. According to the literature, it is also possible to distinguish between the *cognitive* (Cantril 1965) and the *affective* components (Brandurn 1969, Bradburn and Caploviz 1965) of the subjective well-being. The first regards the result of an individual comparative process of living goals, achievements and level of satisfaction, while the second is related to a more emotional and non-rational status of happiness.

Regarding the definition of quality of life it is also interesting to consider the approaches of Hauser and Lörcher (1973) and of Gerson (1976) who make a distinction

between *individual* and *collective* living conditions as well as the research of Galtung and Wirak (1976) and Inglehart (1977) oriented to the definition of *primary* and *secondary* needs and services, of *materialist* and *postmaterialist* values. The *individual-collective* approach primarily concerns the analysis of the level of living in terms of the distinction between personal conditions or desiderata and public structures or interests, while the *primary-secondary*, *materialist-postmaterialist* approaches can be compared with the already mentioned continuum *material vs. non-material* needs (Nuvolati, 1998).

Other models oriented to the analysis of quality of life can be formulated integrating the *individual-collective* dichotomy with the *material-non material* one. An example of such approach is based on five dimensions (Nuvolati, 1993). The first dimension primarily includes problems in connection with the availability and accessibility of *public (or basic) services* such as beds in hospitals, schools, social and transport services. The second dimension concerns all the questions related to the *personal or familial economic condition* of people in terms of employment, income, housing, etc. All these aspects can be considered as *material aspects*. Regarding the *non-material aspects* - even though it is not always easy to make this separation as it is very difficult to distinguish between private and collective problems - we have the organisation of the *public services* such as cinemas, theatres, sportive-recreational areas on the one hand and, on the other hand, the quantity and quality of the relationships between people in a *private or familial* context or at the micro-community level. The last dimension includes *environmental variables* regarding weather, tourist facilities, monuments and architecture, landscape, etc..

Looking at the evolution of research on the quality of life during the last twenty years an increasingly important contribution has been made by health studies (Naess, 1989). The trend from economic and sociological studies toward more psychological and medical studies testify the prevalence of the individualistic approach in terms of physical and mental adaptation of the subject to predetermined living conditions. This perspective does not mean to reduce the importance of the objective inputs, rather to verify the possible integration and conflicts existing between collective and individual needs.

However, from a more practical point of view, all the models presented in this Section converge on a quite similar list of main concerns on quality of life. Such concerns, presented in Table 1, are normally assumed as the most important to be considered to study quality of life. They constitute the classical concerns along which many studies has been developed and that will be considered in the chapter 2.1.

**Tab. 1 - Main concerns of quality of life considered in the literature.**

Concerns
- Population
- Income and wealth
- Health conditions
- Housing
- Services availability
- Crime and social pathology
- Employment and labour conditions
- Environment (traffic, pollution, climate)
- Personal relationships
- Participation

## 1.2. The new frontiers

### 1.2.1. Post-modernism and the cultural shift in the analysis of urban living conditions

Urban living conditions have been seen in several different lights in the course of history and in space, as the present cultural shift in Geography indicates. European cities have become conscious of different problems and dimensions of life quality in different periods of time and in various nations, depending mainly on the demands for urban governance. Planning regulations responded to health risks in the last century, and there was still an interest in hygiene standards in planning and the analysis of urban life at the beginning of the present century (Benevolo 1993). During the post-war period of reconstruction and then physical land-use planning, emphasis shifted towards land use, infrastructure and urban amenities - such as green areas, service land use, education, welfare and related space standards. These are now left to the background in the current concerns of the post-modern city.

The re-invention of tradition and interest on global tourism have created a cultural shift in urban studies. One of the first impressive works in this new tradition, is Schorske's (1981) analysis for Vienna, discussing themes of life quality from the creation of the Ringstrasse to the forces shaping the cultural landscape of this city. The city is now analysed as a work of art, a representation and a text, which is considered as different for the different users and produces in it. The hard base of this turn to cultural and humanistic explorations, is the shift from planning to design and the concern for urban boosterism, competitiveness, but also sustainability. New dimensions of urban living conditions are brought to the foreground as urban competition intensifies in the EU during the 1990s (Bailly et al. 1996; Jensen Butler et al. 1996).

The cultural turn in Geography and Urban studies, resurrects a tradition of research on the urban landscape, which has developed at a distance from urban governance concerns, but now tends to approach them. This tradition was distinctly different during each of the post-war decades. In the 1960s, the anti-modernist Lowenthal (1961) with his "personal geographies" was much appreciated in urban landscape research (Jackson 1989: 20). Later on, the reading of the urban landscape is merged with humanistic rather than social concerns. These gradually dominated the scene, in parallel with environmental concerns in Geography. The cultural shift gains ground, slowly, during the late 1970s, when cultural geographers such as Ley and Samuels (1978), Tuan (1977), Gregory (1978) introduce the concept of "human agency" and transform Human Geography and the practice of urban governance. Landscape analysis departs from Lowenthal's (1961) subjectivism and reductionism, and turns its attention to inter-subjectivity and human creativity. This is reflected in the departure from top-down policy in the regulation of the quality of life. The grass-roots factor enters the scene, forcefully. A belated incorporation of ideas by Berger (1972) stresses that material landscapes are not neutral, but reflect relations of power and dominant "ways of seeing" (Zukin 1991). They are also constructed by representations and ideal versions in painting, poetry, but also academic discourse (Cosgrove and Daniels, 1988).

The tension between structure and agency, however, still holds strong. In the 1980s, Harvey (1985) "reads" the landscape of capitalism within a definition of culture as sets of shared meanings, which are expressed in social practices in localities. The related school of landscape analysis is interested in how the globalisation of cultural production and consumption, influences the relationships between cultural identity,

meaning, and place (McDowell 1994: 146). They analyse the processes by which symbols, rituals, behaviour and everyday social practices end up in a shared set of meanings, which to a large extent are place-specific. Social rather than humanistic concerns predominate in this school, and social divisions in the city are targeted.

The "reading" of modernist landscapes in the late 1980s synthesises these tendencies and in parallel introduces approaches which use postmodern views and approaches (Jackson 1989, Duncans 1988-90, Agnew 1989, Harvey 1989, Soja 1989, Shields 1991, Ford 1991, Mohanty 1991). The new approach has crystallised in the 1990s, in the context of postmodernism in architecture and urban studies. It draws a sharp division from the modernization ethic in urban analysis and governance, which used to stress the values of order in the city. Modernism meant zoning, building regulations, order in space. These have recently become the targets of attack by proponents of post-modern urban environments, with the resurrection of work by Jacobs (1961), Lynch (1960), and others (see Ellin 1996). This school stresses and encourages fragmentation, urban mosaics and the colourfulness of cultural difference as the aspects that improve urban quality of life (Harvey 1989, Leontidou 1993, Ellin 1996).

During the period of modernism, urban theory was criticized as ethnocentric, in that it left out cities that have experienced different development trajectories than those of Europe and the USA. Cities of Southern Europe in particular, have not followed the development or shown the structure found in Anglo-American cities (Leontidou 1990, 1996a). Researchers from the core of Europe and the USA often expressed confusion facing the particularities of Mediterranean cities in Europe and beyond: their characteristics defied modernism. Some researchers blatantly attributed to cities like Rome or Athens a "precapitalist" pattern (White 1984: 161). This has been severely criticized in the light of both the urban political economy, dominated by the informal sector (Leontidou 1990), and of postmodern theory (Leontidou 1993, 1996, 1997).

Now, however, it has been established that South European cities have long evidenced traits of what is called postmodern urbanism: mixed land use, informal building procedures, and fragmentation of space (Leontidou 1990, 1993). In the final end, it is probably deceptive to speak of "post"-modernism for urban landscapes that have existed for a very long period. It was just a different form of capitalism developing in the South, and a political economy and building activity with a much more extensive informal sector than in the West and North of Europe (Leontidou, 1990).

Another important difference demonstrated by the Mediterranean urban landscape is that it is dominated by tradition and historical memory to a much higher degree than the Anglo-American one. Ancient and Medieval monuments, from a period when civilisation and development centred around the Mediterranean, constitute an important attribute of South European cities. Monuments are also crucial in national identity building and collective memory. With the central role of the re-invention of tradition in post-modern urbanism, this type of landscape now becomes especially valuable. Mediterranean cities do not have to "re-invent" anything: their tradition has been always acknowledged around the world and was based on these monuments as national but also global symbols of Western civilisation (Harvey 1996: 309-10, Loukaki 1997).

The re-invention of tradition is one of the strategies developed by post-modern European cities in order to enhance their visibility in the context of place marketing (Kearns and Philo eds 1993). In post-modern Europe, the field of production gives way to that of consumption and communications, and in order to face globalization and

neoliberal politics, cities develop new strategies of urban governance. Urban competition leads to a city-building process based on design rather than planning (Blacksell et al. eds 1994, Jensen-Butler et al. eds 1996, Bailly et al. 1996, Leontidou 1997). Cities compete for the attraction of funding and entrepreneurial interest by enhancing visibility. They try to attract international tourism, they compete for hosting international events and conferences, and they advertise the particularities of their landscapes and their re-invented traditions.

Interest in landscape and the contribution of imagination and aesthetics in city building are thus now in the centre of attention in post-modern European cities, and have an impact on the way urban quality of life is assessed. Urban governance has passed to a neoliberal emphasis on design rather than planning: urban morphology and protection of traditional buildings and spaces, rather than the provision of social infrastructure. There is a growing respect to monumentality, renovation of inner cities, recycling of industrial spaces, waterfront developments, and, in general, local interventions rather than structure planning (Kearns et al. eds 1993, Berry et al. eds 1996, Jensen-Butler et al. eds 1996). Urban competition coincides with cooperation, however. As all these strategies are developed unevenly in European space, a re-polarization in the context of Mediterranean Europe has been already observed (Leontidou 1995).

The increasingly rapid evolution of society and the paradigmatic shifts summarised above has also determined a quite radical change in the definition of quality of life. In particular new theoretical dimensions become more and more important.

On one side, quality of life today does not mean simply availability of resources (material and non-material) but also easy accessibility and use of them. Time issues, information elements, level of competence in using technological every-day-devices, level of freedom in making choice between different solutions constitute important elements to be considered in order to measure people well-being. Many of these themes has been conceptualised by different sociologists, philosophers and economists (for example Nussbaum and Sen, 1993; Gershuny, 1993), nevertheless their operationalisation in terms of construction of social indicators, which are valid and reliable, is still very difficult.

On the other side, large inequalities between groups of population based on the classical socio-economic variables are still evident and determine the necessity to explore more deeply the origin and the transformation of such disparities, considering new issues linked to the ongoing process of modernisation.

In the historical process of urban development, industrialisation, modernisation, technological advancement and innovation have been always accompanied by social divisions. In fact, it is a contradiction that technological innovation, which has been thought to advance the quality of life, has also been accompanied by the deterioration of the life standards of large segments of the urban population and has created internal disparities in urban centres. The question of "quality of life, for whom?" is pertinent here.

The traditional urban indicator model has stressed ever growing consumption and order in the city as an indication of high quality of life. As pointed out earlier, this conceptualisation of the quality of life was related with values of consumer-orientation prevalent during the first post-war decades. Internal disparities were ignored by these models, which focused instead on the urban middle-class population. These models have been later criticised as postulates of consumerism, and modernism, reflecting values

cultivated by dominant social groups and the middle classes. Approaches changed during the 1970s, as outlined below, and across different spaces. The traditional urban indicators model has been criticized as ethnocentric, presenting what are basically Anglo-American cultures, as universal, as outlined in the previous section.

After the 1970s, critical approaches by anti-consumerist and ecological movements occupied centre-stage. Urban social movements would stress quality of life and happiness, and would focus on urban disparities quite distinctively (Pickvance et al., 1991). The most widely used example by urban analysts was the process of urban renewal, where innovation in terms of urban space tended to dislocate former residents and could render them homeless: this is the *renovation-deportation* example, criticized by French urban analysts throughout the 1970s (Lefebvre 1991, Laborde 1994). Urban social movements also sprang up since the 1970s in other European cities. Movements were not only defensive against deportation; there were movements against industrial relocation, movements opposing technical infrastructure provision and even building regulations. Their anti-consumerism was prophetic for the host of writings on urban sustainability at present. Postmaterialist values are also reflected in postmodern thinking, but, as argued above, the main drive behind the cultural turn is materialist: urban competition and place marketing.

Levels of life quality, and the consequent indicators, are difficult to conceptualise at the agglomeration level, cross-culturally and across nations. In order to re-insert a comparative perspective which will not ignore urban cultures different from those in the core of Europe and the USA, multi-dimensional systems of assessment of quality of life and policy therein are necessary for geographers and planners. A recent proposal (Jensen-Butler et al eds 1996: 20-21; Bailly et al., 1996) identifies four underlying dimensions of urban policy: efficiency, equity, control of negative externalities, and budgetary goals. The concept of equity, and its implications for quality of life indicators is discussed in Section 2.2.3.

### 1.2.2. Quality of life and information and communication technologies

In parallel to the concerns and cultural shifts discussed in the previous Section, major societal changes are appearing on the wake of the diffusion of Information and Communication Technologies (ICT). These are now so widespread that they affect every aspect of our every-day life. Working, shopping, travelling, banking, receiving services from our local council, going to the hospital or to the cinema are all activities that come in contact with ICT to a greater or lesser extent. A significant proportion of our children's heroes, whether toys, bugs, or fictional brothers, are entirely computer generated and bear little or no resemblance to human beings.

Some commentators herald this as the dawn of a new bright future, a true revolution comparable to the agrarian and industrial revolutions of the past (see for example Toffler 1980). Others are more sceptical and argue that there is nothing inevitable or necessarily radiant about a technology-driven future. The direction and shape of our future is very much in our hands and likely to include both positive and far less positive features. Education and awareness of both sides of the coin are our best defence against undesirable scenarios of our future being dominated by corporate Big Brother (see for example Masser and Wegener, 1996 in the context of Geographic Information Systems). Others still take amore economic driven perspective and point to the paradox of continued massive investment in ICT over the last 20 years without any discernible growth in productivity (Landauer, 1995).

The policy debate in Europe has been very much driven by economic concerns over the persisting high rates of unemployment, particularly among the young, and issues of growth and competitiveness over the next century (CEC, 1993). The term "Information Society" has come to embrace the wide ranging set of policies pursued by national government and the EC to ensure that the technological developments in the ICT field are harnessed to deliver jobs and continued prosperity. Whilst the emphasis is on economic issues, there is also a recognition that ICT developments pose challenges and opportunities in a much wider sphere, including issues of democracy and participation, social inclusion, equal opportunities, and equal access to people with disabilities (see CEC, 1996)

With these considerations in mind, there is little doubt that ICTs do affect the quality of life. But how can we operationalise and measure the impacts? How can we monitor policies and disentangle the effects of individual initiatives from the broader social and technological context within which they take place? To address these questions, the review of current literature is of limited help. Although there is a considerable body of research on indicators and dedicated journals such as Social Indicators Research, the contribution and challenges that ICT pose to the quality of life are as yet little explored. Important projects and studies such as that made by Coombes et al. (1992) to evaluate the rehabilitation potential of urban areas for the UK Department of the Environment, and the more recent Urban Audit for the European Commission, tend to focus on the more traditional variables thought to affect the quality of life. The study by Coombes et al. for example, identified 47 variables grouped into 6 categories: locational resources (with particular emphasis on accessibility), financial resources, infrastructures (industrial infrastructure, R&D activities, spatial and communication barriers), services (health, education, social services, environment), non-material resources (cohesion of the community, cost of living, sense of identity), and human resources (demography, employment, entrepreneurship). Similarly, the Urban Audit study is currently collecting 33 indicators falling into five categories: socio-economic characteristics, public participation, education and training, environment, culture and entertainment.

Whilst there is little doubt that all of the categories above are highly influential in shaping the quality of life, recent social and technological developments are starting to question their continued validity, or at least the extent to which they are as appropriate for the society of the 21<sup>st</sup> century as they were for that of the 20<sup>th</sup>. From a technological perspective these approaches do not take into account the developments of ICTs that are drastically changes our concept of accessibility, and models for education and training. Life Long Learning is not just a slogan. It is increasingly an imperative. From this point of view alone, it seems ironic that whilst Europe is trying to come to terms and gear itself up to becoming an information-based society, policy making is in many respects still anchored to a view of the industrial society which is not much different from that the turn of the last century. Hence, the European Spatial Development Perspective aims at developing a Polycentric urban hierarchy which is still influenced by the theories of Christaller (CEC, 1997b), whilst one of the most ambitious European projects, the 220 billion Euros Trans-European Transport Networks, is firmly grounded on the belief that socio-economic development is a dependent variable of accessibility, and that therefore, improvements in the latter will *necessarily* result in improvements in the former.

As argued by Graham (1997), these approaches are grounded on a positivistic model of regional science in which space and time are "containers" of human activity, and distance is a barrier to interactions. Whilst appropriate to an industrial society, this view is not applicable to new models of communication and commerce based on

electronic media. Developments like the Internet not only contract space and time, like a new road can increase accessibility. They make the basic tenets of economics and regional science obsolete. Contrary to all other forms of economic goods, digital information has some unique properties, as argued by Cleveland (1982): it grows the more you use it, it can be compressed and summarised, can replace other inputs such as capital and labour, can be transported almost instantaneously and at no marginal cost, it's difficult to control (i.e. it often leaks), and can be given away and kept at the same time. Hence, the whole notion of the Euclidian space and of the economics of material commodities, is radically changed in the context of digital transactions, to an extent that is not yet fully understood. Moreover, the Internet, the Web, and e-commerce create new virtual spaces for social and economic interactions that coexist with the physical world. New virtual communities develop that have no longer spatial proximity as one of their major attributes. Turning the concept the other way around, it is not necessarily true that people living in the same physical community also share the same social reference points (Rheingold, 1994).

These developments create new challenges to researchers, practitioners, and policy makers, particularly in the areas of urban and regional planning. These challenges are all the more complex because infrastructures like the Internet are largely invisible when compared to roads and railways which sustained the industrial society (Graham, 1997). This of course does not mean that the death of cities or space. Space still matters, and Hall (1999) convincingly argues that even in an Information-based economy, cities survive together with traditional urban hierarchies. Cities continue to perform crucial roles as centres of learning, business, and leisure, but the hierarchy is now affected in new ways by the impact of global economic and technology-driven forces. Past, present and future coexist in different forms, but it is clear that urban policy analysis has also pay increasing attention to the new forms of economic and social communication, and to the opportunities and challenges that the ICTs pose to our quality of life. This also includes the identification of key areas of interest and the definition of potential indicators expressing the increasing role of ICTs in our daily living.

A useful starting point to operationalise the concepts outlined above, is the Green Paper on Living and Working in the Information Society (CEC, 1996). This paper, identifies three main areas of concern: the first, *Working in the Information Society* focuses on the impact of ICTs on working practices, and identifies three main challenges:

- "a first challenge is to build knowledge and raise awareness of the potential of the new paradigm of work organisation to deliver both productivity growth and job satisfaction.
- a second challenge is to help SMEs, the job generators in the EU, maximise the potential of this change to become more competitive.
- a third challenge is to modernise the contractual framework for working life to find ways and means to reconcile flexibility and security" (CEC 1996, pg. 2).

The second, *Employment in the Information Society*, addresses a key area of concern, and in particular the extent to which ICTs may be destroying more jobs than they are creating or displacing job creation spatially (for example jobs losses in Europe and creation in India) or across social classes. Hence, the key challenges identified include:

- [what Europe needs] “is a substantial overhaul of education and training that can match the ICT revolution and keep pace with continuing technological development during the years to come.
- the education system must be transformed from teaching to learning. Enterprises must offer more learning by doing. The unemployed must be offered retraining instead of long term unemployment and de-skilling” (CEC 1996, pg. 2).

The third area, *Cohesion: Living in the Information Society*, focuses on the potential contribution of ICTs in reducing existing social and geographical disparities in the Union. In this respect, the key challenges are:

- “a first challenge is to ensure that the liberalisation of telecommunications proceeds fully and rapidly across the Union and that the new regulatory framework supports cohesion objectives.
- a second challenge is to integrate more closely the Structural Funds and Information Society policies, so as to stimulate the access and use of modern ICTs. The process of stronger local involvement through local and regional employment pacts could be an important vehicle for a new, more employment intensive and human resource oriented cohesion policy.
- a third challenge is to ensure that the Information Society becomes a tool to create an inclusive society. The Information Society should be about people and it should be used for people and by people to unlock the power of information, not to create inequalities between the information rich and the information poor” (CEC, 1996, pp. 2-3).

Embedded in this third challenge, is the whole notion of increasing access to public sector information which has gained prominence since this Green Paper through the INFO2000 programme of the European Commission, and more recently through another key Green Paper: *Public Sector Information: a Key Resource for Europe* (CEC, 1999). It is therefore important to upgrade this challenge to a fourth main area of concern: *Access to Public Sector Information*. The key issues identified by the 1999 Green Paper refer to the definition of public sector, and public sector information, the relationships between public and private sectors, and other thorny issues such as copyright, confidentiality, liability, and conditions of access including pricing. Underpinning these issues there are two fundamental questions:

1. How to reposition the public sector, and local government in particular as the main collector of information and provider of services to citizens, so that the provision of information becomes one its core functions. This is highly topical as public sector organisations increasingly become “enablers” of services provided by the private sector, and the legitimacy of democratic institutions is questioned particularly by the younger generation, as apparent by increasingly low turn-outs at the elections.

2. How to configure in the digital age, the value-added chain in the provision of information, including the definition of “universal service”, and the respective roles of public and private sectors. From this depend many of the questions raised by the Green Paper, which have been summarised above.

Whilst it is not the objective of this report to discuss these issues, and their implications in depth, it is worth emphasising that access to public sector information is not only crucial to foster the development of a European information industry, and hence

the millions of new jobs hoped for by the Information Society policies (see CEC, 1993); it is also a crucial test-bed for increasing public participation, and informed democracy, and hence for improving the quality of life, particularly in those urban areas in distress affected by significant processes of social exclusion. Moreover, the development of an inclusive information society based on quality information flows between public sector agencies, communities, citizens and firms can only take place if appropriate ICT strategies and information infrastructures are developed at the local level. These local information infrastructures are the prerequisite for implementing true “Joined-Up Government”, which is the banner in the UK (but similar initiatives exist elsewhere) under which several important policies have been taken to increase partnership between agencies to target more effectively their resources and deliver better services. They are also necessary to deliver to citizens and firms local information which is of true relevance to them, thus empowering to become full partners in the Information Society.

### 1.2.3. Emerging perspectives for analysing quality of life

Indicators for life quality are a contradictory measurement, because different groups and users of the city react in contradictory ways to them. For example, innovation has its proponents but also its enemies, as shown in the Paddington inhabitants’ opposition to the Heathrow fast train, which improves accessibility for visitors, but may create congestion for inhabitants. The number of conferences in a city may improve its rating in urban competition, but disturbs a part of its inhabitants. International events are also very controversial, for that matter. The number of doctors may be irrelevant if they are inaccessible to certain social groups or if the welfare state is weak, and the number of taxis may be high where public transport is defective.

The main aim of the new research on quality of life should be therefore oriented to integrate these components and to study the contradictions between the modernity and the social exclusion. In other words, how can the new technology, the growing spatial mobility of the population, the competitiveness of the economic environment reinforce or diminish the quality of life according to the socio-economic structure of the population?

Cities are still the privileged points where technological progresses, concentration of different populations and inequalities assume the most evident and problematic features. To study quality of life in the cities today means to define different paths in accessing and sharing available resources and services, to emphasize strategies and practices of the people in solving the urban complexity, to verify the existence of democratic arena for the negotiation of the different needs, values, culture of the citizens. New valid and social indicators must be thought and developed in order to find out the contradictions existing between economic, environmental, cultural and social development and to compare cities. This last aim is very difficult to be fulfilled because of the actual lack of basic statistics, as well of comparable indicators collected in different countries.

In view of these considerations it is possible to consider as new perspectives for studying the quality of life in the contemporary society, six analytical dimensions presented in Table 2:

**Tab. 2 - Crucial dimensions of the quality of life.**

Dimensions	
-	general socio-economic development of the urban community
-	services available in the city
-	internal social disparities between residents
-	attractiveness of the city (competitiveness but also possible conflicts between urban populations)
-	technology and innovation potential
-	physical environment

The focus of this study is on the first five of these dimensions<sup>1</sup>. As shown in Figure 1, the first two dimensions are part of the resources and services stock (input), while the other three relate to the accessibility procedures and constraints (process). In other words, to translated a finite set of resources and services in a better quality of life it is posited that:

- there must be equal socio-economic opportunities for different people in different socio-economic classes,
- there must be adequate and diffused skills and competencies for different groups of the population enabling them access to services,
- there must be reduced potential conflicts between internal and external metropolitan populations (residents, commuters, city-users, businessmen, etc.),
- there must be freedom in selecting procedures to access resources,
- there must be a democratic and diffused distribution of information, and of the technologies and skills necessary to access it and exploit it.

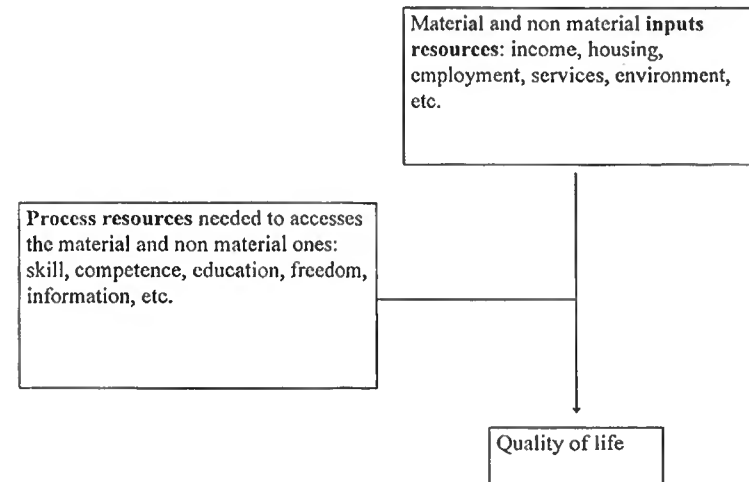
This approach follows the EU policies adopted for improving a sustainable urban development (CEC, 1997c), which focus on:

- strengthening economic prosperity and employment in towns and cities,
- promoting equality, social inclusion and regeneration in urban areas,
- protecting and improving the urban environment,
- contributing to urban governance and local empowerment.

In particular these policies centre on the issues related to the pathways of accessibility which are limited or improved by socio-economic, spatial, cultural and educational filters. They also recognise that the urban quality of life can be considered as the result of a good communication and information systems oriented to enlarge the participation of the population and limit social disparities, without compromising the identity of the users.

<sup>1</sup> Protecting the environment for local and global sustainability is one of the main goals of the urban policies aimed at improving the quality of life in contemporary cities. The importance of the environment for quality of life issues is well documented in research. In this report we will not explore this wide literature and we will focus instead on other crucial social and economic themes. Nevertheless the group is well aware of the influence of the environment on living conditions.

**Fig.1 - Inputs and process resources in determining quality of life**





## 2. Methodological Issues

### 2.1. Background issues

#### 2.1.1 Introduction

The technology of mobile personal communications introduces a revolutionary shift not dissimilar to the one occurred in transportation systems when the private automobile was added to the railroads. In the past the diffusion of private cars has contributed to radically change the urban morphology of the 20<sup>th</sup> century, substituting central places with edge-cities, and giving rise to the first generation metropolises, composed by a core and fringes. Contrary to what prophesied by Toffler (1980), the diffusion of information technologies did not stop urban growth, nor substituted physical movements. On the contrary the combination of immaterial with physical communication technologies has produced a further extension of the urban edges. In addition the growing availability of information technologies for domestic use enhances the demand for larger home spaces and on the other hand increases the range of consumption choices. In turn these push even further the rim of edge-cities and increases communication flows. At the end of the Amazon.com click-a-book there is a brown UPS truck coming up the alley. These new opportunities give rise to the second generation metropolis based on population of city-users and eventually to the long range urban nomadism of metropolitan-businessmen who accompany the emergence of the third generation metropolis or global city.

As it happens in all periods of deep structural mutation, the old and the new are highly mixed, in reality as well as in the minds of men, and it is difficult to sever one from the other. Thus it is possible to talk about *de-urbanisation* and live in cities choked by automobile traffic, to hear about *cabled cities*, and see flourishing businesses of express mail transportation manned by inner-city kids on bikes, to observe large chunks of urban land vacated by manufacturing, and experience increasing urban settlement costs and so on. Giddens (1990) writes that the city has a specious continuity with the past and indeed there are at least three urban formations intermeshed in the territorial reality, particularly in regions with millenary urban history such as Europe. The traditional town (with all its historical variations) that can be defined as an entity in which the *commune*, or its institutional and physical morphology, coincides with a *community*, a sociological entity defined by interactions among individuals, groups, classes and organizations. *The mid-XX century metropolis* embodied in the idea of *metropolitan area*. An entity less easily definable than the traditional city, but still fairly interpretable by a functional system, large, but limited in area (albeit with uncertain borders) and dominated by a centre(core)-periphery(fringes) morphology. In its exploded version, Jean Gottman's *Megalopolis*. And finally a new entity that is still difficult to grasp and that as been variously defined as *World city*, *Global city*, *Exopolis*, (Soja, 1992) an open network with no central places, or with a plurality of "nodes", not necessarily arranged in a clear hierarchical order. The abundance of definitions and terms, rather than their scarcity is another indication of the deep transformation under way in urban areas the world over. In periods of rapid change it is first of all the conceptual order to be shaken: old terms loose significance, while new ones, often proposed with evocative in lieu of analytical purposes, add rather than subtract to the terminological complexity. This latter entity is also more difficult to define on the territory, and its borders may vary by many orders of magnitude, depending on the particular "net" we decide to make reference to. No matter what exact definitions we accept for the new urban form, many of the social problems of contemporary metropolitan societies depend on the coexistence and superimposition of these three "urban layers". The *first generation metropolis* has not totally substituted the

traditional towns, and the *network city*, or *second generation metropolis*, still contains towns and metropolitan areas.

In periods of rapid change the knowledge apparatus is profoundly affected. The observational tools upon which practically all our knowledge of urban phenomena is based have become dangerously obsolete. They are almost totally based on the night-time population i.e. on the sleeping city. Only few data are systematically collected on the working city and very little or nothing is known about the active city and little too about the actual mobility of urban dwellers. Basically the official statistical system is straitjacketed by an administrative system, and its data-collection procedures which has not kept pace with the new urban morphology.

#### 2.1.2. Definition of cities

This research regards the quality of life in the cities. But what do we mean by cities? And what we mean by cities from a statistical point of view? According to Eurostat (1992a) there are four ways to define a city. It can be defined as:

- urban localities, defined by the town's administrative boundaries or by its status in law;
- urban agglomerations or urban units, which embrace continuously-built urban centres forming either part of one administrative unit or a group of several;
- urban regions, comprising a nucleus town and its sphere of influence or employment catchment area, which are frequently defined in terms of commuting;
- polynuclear urban regions, or conurbations, which may be continuously-built but comprise a number of centres polarising human dealings. They are frequently the product of a number of urban agglomerations or regions which, though initially separate, have become merged as a result of their geographical spread (Eurostat 1992a:11).

Which one of the concepts of city is used depends mainly on the questions raised. From a theoretical point of view, cities today present a so strong and complex relationship with the surrounding areas that their quality of life cannot be analysed only in term of characteristics of structure and population living in the core<sup>2</sup>.

However, frequently, more practical considerations play a decisive role. In particular, if aggregate data have to be used exclusively, then the collecting of data must be restricted to official statistics relative to the administrative units (or sum of administrative units) considered.

The definition of cities in term of *one administrative unit*, the lowest local level for each country (Quick, 1994) is probably the most used. This restriction has the disadvantage that those sections of the population that lie outside the administrative borders as a result of suburbanization processes are not represented in the data. Such a choice is primarily due to the difficulties in defining standard urban areas<sup>3</sup> and in

<sup>2</sup> For example a social indicators such as the number of beds in hospital per 100.000 inhabitants ought to be related not only to the residents in the city, but to the total number of potential users living in the city and in the surroundings or even in the metropolitan area.

<sup>3</sup> The concept of urbanisation can be defined in different ways and present different levels.

collecting data on quality of life for the small administrative units included in these urban areas.

In West Europe there are around more than 500 cities (proper cities) with more than 100,000 inhabitants (Tab. 3). Excluding the United Kingdom, which presents a very large number of cities (222) because of a specific administrative urban delimitation (district area council), the number of cities turn out to be 297. 167 of these cities (56,2%) are concentrated in the OECD countries: The Netherlands, Belgium, Germany, Switzerland and Italy.

**Tab. 3 Number of West European cities (proper cities) with more than 100,000 inhabitants per country in 1991 or close year.**

European cities > 100,000 inhabitants	n.	%
Austria	5	1.0
Belgium	7	1.3
Denmark	1	0.2
Finland	6	1.2
France	37	7.1
Germany	83	16.0
Greece	8	1.5
Ireland	2	0.4
Italy	52	10.0
Netherlands	20	3.9
Norway	3	0.6
Portugal	3	0.6
Spain	54	10.4
Sweden	11	2.1
Switzerland	5	1.0
United Kingdom*	222	42.8
Total	519	100.0

Note: The large number of UK cities is due to the statistical definition adopted in this country for defining cities normally corresponding to the *district*.

Source: elaboration on United Nation, *Demographic Yearbook*, 1994; and other national sources.

In the future the concept and the definition of the city will continue to be important issues to deal with in order to develop comparable research. In particular:

- the definition of the city should be worked out and agreed upon in cooperation with the different parties, especially in cooperation with the individual countries and cities. When striving at comparable urban indicators, we need two geographical units: the administrative city and the functional urban region of the city. Moreover, the indicators should be presented together with some contextual information about the city, comprising a few words about the evolution of the city and a description of the operating environment of the city.

---

About a definition of *densely populated area*, *intermediate area* and *thinly populated area* see Eurostat (1992b:52).

- Cities have, as local governments, most of the responsibility for managing urban change. Very often, cities are service providers and they develop and maintain the infrastructure. The city administration has the empowerment to run the city. Therefore, it is evident that information should be available and presented for the administrative city. A city has, however, a great impact on its surrounding area in terms of commuting, jobs concentration, traffic systems etc. Hence, there is a need for delineation of functional urban regions such as those defined for Europe originally by Hall and Hay (1980) and used by Cheshire in several of his studies (see for example Cheshire and Carbonaro, 1996 and Cheshire and Hay 1989). These regions are based on travel-to-work areas and combine places of work with corresponding places of residence which makes them economically more coherent. This approach allows the establishment of a more consistent framework of areal units. However, since in the EU no official statistics are published for such areas, more work is required to collect consistent and compatible data before they can be used across Europe.

- It is noteworthy, that comparing cities by their characteristics - rather than their population sizes or population densities - makes better sense and gives a true understanding of developments there.

- The lack of tested conceptual frameworks for various urban statistics is still a problem. Efforts have to be made to establish consistent and common definitions and classifications for urban statistics, and for furthering comparability of international urban statistics. Co-operation should be encouraged between cities, city networks, urban research institutes, national statistical offices, EUROSTAT and other international statistical authorities, above all the International Statistical Institute (I.S.I.), its sections and committees, especially S.C.O.R.U.S. (Standing Committee on Regional and Urban Statistics), and the United Nations various departments.

### 2.1.3. Data and studies on cities

Data on cities for different European countries are very difficult to be found and compared<sup>4</sup>. Actually only few experiences have been made in this sector. One is the DATAR-Reclus data-base containing statistical information for 165 European agglomeration cities (with more than 200,000 inhabitant) used by Brunet (1989) in order to empirically set up the *Blue Banana* model. Other quite similar data have been collected for the research project *Cities and the Economic Development*, carried out by Fondazione Agnelli (1989), for the research *Le Système des Villes européennes* performed by Cattani et al. (1994), mainly using the *Geopolis* data-base, for the research *Urban Problems and Regional Policy in the European Community* conducted by Cheshire et al (1988)<sup>5</sup>. All these researches are anyway mainly oriented to analyse the economic structure, the distribution of functions, the level of technological innovation of the cities than their quality of life although also the demographic and socio-economic aspects are considered in the analyses.

A small collection of data by the Statistical Publications and Offices in five European Countries (Germany, Italy, Belgium, the Netherlands and Switzerland) was also performed for a study for the Commission of the European Communities on the

---

<sup>4</sup> About the problems concerning the lack of data-bases for European cities see also Lichtenberger (1995:185).

<sup>5</sup> For a more complete analysis of the *Historical Data Bases* and of the *Comparative Studies of European Cities* see, in particular, Eurostat (1992a, chapter VIII and IX), N.U.R.E.C. (1995) and Eurostat (1995).



quality of life in the cities with more than 100,000 inhabitants of the so called *Old European Cities Belt* (Nuvolati, 1996).

At the moment, two other international research programs about living conditions and infrastructures are in progress: the N.U.R.E.C. *Large Cities Statistics Project* (LCSP) and the UNCHS (Habitat) *Indicators Programme*. The first one is based on a questionnaire addressed to 3,600 cities around the World with more than 100,000 inhabitants<sup>6</sup>. Because of the reduced number of returned and completed questionnaires such a data-base result today quite far to be completed. Moreover, only some indicators of LCSP relate to quality of life. Quite similarly, also the United Nations Centre for Human Settlements (Habitat), *Indicators Programme*, defined a large list of social indicators to be collected at national as well as at regional and urban levels in the world countries (Europe included). On 1997 the *Indicators Programme* has collected results for 113 countries and 181 cities through Asia, Latin America, Eastern Europe, the Pacific and every other regions of the world.

The most important empirical comparative research on the field of quality of life in European cities is currently going on by the EU, DGXVI. The aim of the study, named *Urban Audit*, is to design a series of indicators to be applied to 58 European cities and conglomerations as well as to selected areas or districts within these cities. A preliminary study on the availability and need of urban indicators has been prepared by Poulain (1997). The OECD publication, "Better understanding our cities: the role of urban indicators" constitutes another important methodological contribution. The report surveys the state of the art in designing and using urban indicators and calls attention to specific types of indicators, in particular, cross-sectional, that need to be developed.

In order to avoid overlapping with larger projects the report for the Committee of the Regions is not oriented to define a new general list of social indicators or to collect empirical data. Indeed, it is finalised to the identification of the emerging aspects of quality of life in the modern society, as well as to the analysis of some methodological problem linked to the construction of indicators. Nevertheless, some empirical data are reported, mainly to describe some trends and to test the quality of the indicators.

## 2.2. Toward the individuation of indicators

There is still a large discrepancy between the theoretical debates on the quality of life reviewed above and the current use of indicators which fail to capture its complexity. A large number of different attempts have been undertaken to measure quality of life. Basic ones can be differentiated by at least two approaches: questioning the population on the more subjective aspects of the quality of life, or building indicators from secondary statistics with the aim of defining objective measures. Whilst both methods have positive and negative features, the study commissioned by the Committee of the Regions requires indicators that are: 1) in line with the current theoretical debate, 2) easy to operationalize, and therefore based on readily available data, and 3) going beyond the current crude measures of GDP and unemployment.

<sup>6</sup> On the methodological approach and the first results of this research see the last N.U.R.E.C., *LCSP - Interim Report*, Duisburg, January 1995. Such a research is a continuation of the I.S.I (International Statistical Institute) series titled *International Statistics of Large Towns*. Another study based on questionnaires and quite similar to LCSP is the research of the Population Crisis Committee (1990) about the quality of life in the 100 largest World Metropolitan Areas.

From a methodological point of view, major issues emerge not only from the definition and conceptualisation of quality of life, but also from the "urban" dimension of the study. In particular, there are three sets of issues. The first one concerns the demarcation of the city as spatial, social, economical and political unit. The spatial demarcation always takes a central role but many of the methods available are not suitable for a permanent observation of the cities even if they are based on administrative units, like in the Atlas of Agglomerations in the European Union (N.U.R.E.C. 1994).

The second aspect refers to the internal differentiation of the city which is frequently not considered although everyone knows that large differences exist within each city. These differences can influence the quality of life of a city so lastingly that these differences should be taken into account at any rate by the development of an indicator system. Therefore, when considering indicators it is necessary not only to use arithmetic average values but also measures of dispersion.

The third aspect relates to the fact that even if the city is considered as a unit, this cannot be regarded without its geographical context. The quality of life is determined not only by the city itself, but also substantially influenced by the surrounding environment. The environment should be evaluated as a multi-dimensional factor including the political, cultural and economical contexts within which the city is operated. As a matter of example, it is clear that the services and facilities existing in a city do not serve only its local population but also that of its catchment area. Equally, the geographical location of a city has major repercussions on connectivity and through traffic which in turn affect the physical environment.

With these considerations in mind, the next section illustrates some of the additional issues, which need to be taken into account when creating robust and data-parsimonious indicators in terms of both data availability and comparability of the results.

### 2.2.1. General socio-economic development

Each study of quality of life contains indicators regarding the socio-economic situation of the population. Their assessment however, varies. An atlas published in Germany (Korzak 1995) showing and analysing quality of life on a regional basis, lays only little stress on the socio-economic situation since only approximately 20% of its indicators consider this sector. By contrast, most case studies or the project "Urban Audit" of the EU take into account the socio-economic aspects to a far greater extent.

Socio-economic indicators are undisputed the focal part of each study. They have an essential influence on the scope of action of the individual. In principle, a solid economic basis cannot be equated with a higher level of quality of life. A sound financial basis however, leads to larger potential of action. The socio-economic situation has thus rather to be understood as a limiting element. Even if a city offers attractions such as many theatres, good restaurants etc. the question arises to what extent the population is in a position to make use of these facilities. To answer this question it is not sufficient to ascertain the arithmetic average but certain tools are necessary measuring the distribution of the socio-economic indicators within the population. Only then the degree of the potential demand for advanced services can be determined.

The list of indicators available to describe the socio-economic situation of the population is large, and the selection largely depends on the purpose of the study, and the resources available. In general terms, key indicators comprise gainful employment,

unemployment, and income. As reliable information on the latter is often difficult to gather, an often used proxy indicator is home ownership.

**Gainful employment** gives significant information relating to economic life and economic development. Moreover, its importance goes beyond economic issues as gainful employment guarantees not only one's living but plays also an important part in the self-development of the individual. Apart from this direct influence on the individual quality of life there are indirect effects as well. A powerful economy grants a region high tax receipts. In Germany income tax is the most lucrative kind of tax from which benefit both Federation and Länder. By legislation one part of these receipts is distributed to the communities where it can be invested into the local infrastructure and thus leads to an improvement of quality of life of the population.

**Unemployment rate.** This indicator sums up the economic problems of a region and involves at the same time a high conflict potential within the population. It is not an abstract quantity but has substantial influence on the situation of those affected and their families. Resulting economic and social conflicts cannot be avoided. Emotional pressure has to be added, in particular when unemployment lasts long-term. Subsequently unemployment becomes a serious personal problem and at the same time a challenge of society. For the person affected high financial losses are involved leading to the reduction of social contacts, conflicts within the family and sometimes even to deterioration of health. For the government unemployment means a considerable cost factor. For this reason, the reduction of the unemployment rate and the achievement of full employment are focal points of every policy.

The unemployment rate is undisputedly one of the most important and indispensable indicators within a system enabling the observation of quality of life in cities. It has to be underlined however, that there are considerable problems in international comparisons on these indicators, since the definition of unemployment varies between the European nations, and even within the same country it may be changed very often to suit political needs. Hence, longitudinal analyses of unemployment rates are complex both within and across countries. Having said that, this indicator has important advantages such as being currently and regularly available at short survey intervals. National surveys of the Statistical Bureau, micro census and the publication of the relevant special authorities can supply the necessary statistical data.

**Income.** The field of social-economic indicators comprises also the personal pecuniary circumstances that are considerably influenced by the level of income. Income data is however notoriously difficult to collect and therefore, a convenient proxy variable to assess, in Western countries where private property is highly valued, the level of household wealth is home ownership.

**Home ownership.** In most European states this indicator is ascertained in the frame of the census and is thus available on the regional level of cities at intervals of several years. In Germany the results of sample surveys can additionally be provided. As discussed later, comparability of this variable across countries must also take into account differing social and cultural values, and therefore its not without complexity.

### 2.2.2. Service availability

The term "city" is automatically linked with specific contents: great variety, a broad range of consumer goods and services, particular educational facilities, a comprehensive supply of entertainment and cultural events. The city is the location of

choice for advanced producer service centres such as financial and legal services. In these fields, the city appears as a supplier since it is one of its very own functions to provide all these services. The study of quality of life in Germany (Korzack, 1995) incorporated cities and established at a regional level an index to characterise the range of services of the individual regions. Among the 543 regional units, exclusively large cities take the first 30 places. The broad range of services available in the city is one of the criteria through which the town differs from rural areas. At the same time a certain dependency arises because many services are only available in the centres.

It has to be stressed however, that the range of services in cities is not homogenous. There are considerable differences between the individual cities in relation to their size, structure, and specialisation. For example, there is generally a much higher concentration of services in university cities or cultural and administrative centres.

A great number of indicators can be used in order to describe the services of a city. The most important domains relating to this issue are commerce, education, culture, entertainment, hotel and restaurant business as well as health care.

**Commerce.** It implies a great variety of services. Besides the goods of everyday consumption, medium- and long-dated products are available in the cities. Two lines of development can be identified leading to serious problems for the cities: the growing uniformity of the central parts of the towns caused by the globally operating chain trades on the one hand and the persistent relocation of business to peripheral areas on the other hand. In this respect, it would be of great interest to observe the variety of future trends by means of suitable indicators. However, for current surveys those indicators are rather unsuitable since problems mainly occur in the field of data collection.

**Education.** One of the principles of German policy is to grant general access to education. Not all processes within the educational sector can be measured because in principle, it takes place everywhere, in everyday life as well as in the family. Statistics have therefore to be limited to quantitative aspects such as information about the number of pupils and students, exams passed etc. It can be started from the assumption that in the cities there are many opportunities to attend schools providing general education. For this reason, these data are only of secondary importance to the analysis on the city level. In comparison, indicators representing secondary schools and possibilities for further education such as industrial schools and universities are much more significant.

Besides the public education system, large cities nearly always provide also private education facilities. Those include private schools providing general education, in particular with definite pedagogical orientation, private coaching, language and computer schools etc. Due to these additional facilities, large cities have, in terms of quality, an advantage over cities in rural areas. These indicators do not only relate to quality of life but also to future trends of a region, since lifelong learning of gainfully employed persons is an important prerequisite for economic success.

Another useful indicator results from the number of existing libraries. Media such as books, films etc. are necessary to convey science, art and literature. Only by these media it is possible to open education to all classes of population. The insufficient number of libraries corresponds to a low regional level of education opportunities. There is no telling yet however, to what extent the new technologies will compensate these regional disparities.

**Culture, entertainment, hotel and restaurant business.** These sectors have a very important function, because the city is also a place for leisure activities. Particularly in the last decades leisure time has taken a growing value within individual life. In this field a number of indicators trying to reflect cultural life, entertainment and restaurant business can be identified. Their forms of expression are manifold: theatre, cinemas, cabaret, circus, restaurants etc. Theatre as the expression of advanced civilisation, museums as educational establishment and place of historical awareness, cinemas as art form of the modern age. Indicators based on cinemas should be emphasised because they are an important element of our everyday culture. Great and small can afford to go to the cinema, and it has also the function of a social meeting place.

**Health care.** The infrastructure for health care and medical advice focuses on the cities where hospitals and doctors are mainly to be found. Every hospital offers specific diagnostic methods and prefers its own therapeutic procedures, each doctor has his own area of specialisation. This leads to a most complex range of medical services that is only available in cities and easily accessible for the inhabitants. For this reason, indicators for health care should be taken into account. Certain problems however, can arise when comparing data of the health care sector on an international basis: owing to certain circumstances such as different attitudes towards illness due to cultural differences, different insurance systems, the national definition of the data collected as well as the collection modalities, it is very difficult to implement an international comparison.

**Operationalisation.** For each of these areas different variables can be measured to give a description of the services available in a city (see Andranovich & Riposa 1993; Lineberry 1984; Mendenso 1986):

- location of service within the city – in view of accessibility
- frequency of service – number of services in one period of time
- quantity of service proportion of service per 100,000 inhabitants
- quality of service – attractiveness, physical condition, service personnel, client satisfaction
- consumption of services – number of services enlisted

If the official statistic is used for the definition of the indicators, all quantities resulting from the quantitative details can be applied. Examples are cinemas per 100,000 inhabitants etc. Qualitative indicators are desirable, but also problematic in the analysis stage. One of the central points is the collection of the relevant data and its comparability.

In case indicators of the range of services are defined and analysed, the following question inevitably arises: which population is supplied? The range of services reaches far beyond the administrative boundaries of the cities: not only the city but also a whole region is supplied. To make matters worse, this region does not have a standardised quantity, since every service has its own catchment area. An opera house, for instance, has a larger catchment area than a cinema has. If at all, these regions can be distinguished only by comprehensive case studies.

If the analysis focuses exclusively on the urban population, the supraregional supply function of the city results in an over-estimation of the quality of service, and hence quality of life, available to the resident population. The higher the attractiveness of the range of services and the larger the catchment area, the greater the degree of over-estimation.

An additional issue is that if indicators are related to the population, it cannot be concluded that the quality of life increases proportionally to the quantitative range of services. Assumptions can be made that for each individual supply function there is something like an optimal value that is necessary to be achieved. In this field however, there is an enormous deficit in research.

### 2.2.3. Internal disparities

This section concentrates on “equity”, or internal disparities in cities. Postwar European urban socio-economic composition is characterised by a contrast between affluence and poverty on the one hand, and among different ethnic (and also gender and age) groups in space, on the other. Where disparities go unmitigated by the middle classes, we speak of *polarisation*, while in most cases in European cities the middle class tends to create a buffer between the rich and the poor. Technological innovation may deepen social divisions differently in different types of cities: in global cities, we have polarisation (Sassen 1991), in peripheral ones we have homogenisation with the flattening downward of the quality of life of most social groups (Leontidou 1996b), and in border cities, social/ ethnic disparities may attract foreign intervention and bring about war, as highlighted recently in the Balkans.

It is interesting to observe a shift in indicators of internal disparities observed by urban analysts through time. In the past, there was a heavy emphasis on urban spatial segregation on occupational, racial, ethnic and educational lines. During the post-war period, Factorial Ecology formalised these emphases into quantitative models, which ordered the urban morphology in different ways, according to the factor studied (Carter 1995). During the period of critical geography after the 1970s, emphasis shifted towards class structure, the employment/ unemployment dimension and the ethnic minorities question.

Currently, post-modern analysis has shifted the emphasis towards the sub-cultures composing the urban mosaic: gender, ethnicity, migration and poverty are focused upon, and the urban class structure is set aside. Post-modern authors address popular cultures and quality of life, contrasting them with dominant cultures. Social difference is researched and respected (Leontidou 1996a, Ellin 1996). Socially excluded groups tend to live outside or opposite the dominant societal norms, and to define urban quality of life in their own alternative ways (Leontidou 1990; Leontidou et al. 1999).

During the period of postmodernism, attention is more focused upon the way in which social divisions among different social classes, races, ethnic groups, age and gender categories create different needs for life quality. Residents and visitors use the city differently, tourists seek and enjoy different attractions, and would therefore be sensitive to different indicators. Facilities and infrastructure have a different importance and meaning for the life quality of different social categories and groups. Globalization and the revolution in communications pushes to the foreground the relevant indicators used in our comparative analysis of European cities.

Basic data for internal urban social disparities are difficult to assemble, because income groups in European cities are not presented in statistics, and occupational categories used in each country vary. The latter defect can be overcome with experts' cooperation, but the former seems harder to face. Also, urban segregation and spatial disparities can not be easily measured by using one single indicator for each city. Gini coefficients could be tried, but it is complicated to assemble the necessary data.

In several countries, there are appropriate indicators in the registration of consumption patterns of households and in income declared to tax authorities, but these are often, unfortunately, not desegregated in space. One conclusion is that the competent authorities should be contacted and convinced to desegregate this data. As for existing data, their use depends very much on local knowledge, because different figures reflect different conditions in each country and region.

Whilst the problems highlighted above are critical for cross-national comparison, the analysis of inequalities within cities can benefit from the increasing diffusion of spatial databases, digital maps, and technologies to handle them such as Geographic Information Systems (GIS). These tools offer opportunities to for public sector agencies to analyse the social and economic inequalities, and need in a much more focused way, plan intervention, and target resources more effectively by concentrating them on the areas in greatest need. Some example are illustrated in Section 3.3.3.

#### 2.2.4. Attractiveness

Attractiveness is a very subjective and at the same time a very abstract quantity to describe a city. Hardly any other quantity gives rise to such different and, above all, such contrary opinions as the term attractiveness does. For some people attractiveness means the face of the city, for other people it is the cultural life or the countryside around. If attractiveness shall be judged, it is not possible to define objective indicators. In no other field the individual perception differs more. Which are the features that contribute to the attractiveness of a city? Is it a measurable quantity at all?

**Supply function.** When trying to answer the first question it can be realised that one sector of attractiveness has already been dealt with - the supply function. One component of urban attractiveness consists in the use of these functions. In connection with this fact it has to be underlined that buying is not always reduced to the function of "providing oneself with something", but can also be interpreted as having a leisure function. On the planning side, this objective is concretely pursued: the shopping spree as experience. This involves good accessibility preferring the car as transport means, a pleasant urban surroundings and the opportunity to link the shopping with other attractive activities such as going to a restaurant or visiting the cinema. The indicators suggested until now can thus be interpreted according to the sense of attractiveness as well.

This specific feature can definitely encourage the visitors of a town to allocate best marks. For the greatest part of the urban population urban attractiveness means an accumulation of many other criteria that each individual evaluates in a different way. These criteria include the environmental situation, architectural design and the recreation facilities in the city centres. The assessment of attractiveness however, cannot be stopped at the boundaries of a city but the existing recreation facilities in the surroundings have a certain influence on the peoples' opinion as well.

**Quality of environment.** All indicators referring to environment are of great concern. In this connection, the term environment has to be taken in its broadest sense, i.e. , the natural environment and the environment as it has been formed by man. This includes the nature of the basic elements as they are ground, water and air influencing the state of our health in a most considerable way. In this respect ecological indicators can be created determining the quantity of environmental damages such as pollution burden, SO<sub>2</sub> level, aerosols etc. The environmental indicators include also quantitative

surveys on the quality of open spaces, water areas as well as indicators relating to climate.

These are highly promising indicators since they have direct influence on the quality of life. However, putting the survey into practice and comparing the data collected beyond the national frontiers faces substantial problems: methodological issues arise starting at the measuring technology and ending with the problem how to relate the measured points to large areas. Moreover in many countries some variables are not applied in the programmes of the official statistical surveys. In Germany, for instance, site-specific surveys are regularly carried out so that the central urban open spaces can be used as indicator. In Italy, on the other hand, the available number of those data is unfortunately low. For this reason, these indicators are not very suitable to integrate them into current observation.

**Operationalisation.** In the light of the considerations above, substitute indicators have to be found giving a relatively objective representation of urban attractiveness. For this purpose, two indicators are suggested: the number of annual overnight stays related to the population on the one hand and the migration balance on the other hand. The number of overnight stays represents the extent to which the city attracts visitors from outside. This is an overall indicator that sums up all types of visitors, motivated both by business and tourist attractions. The migration balance however, represents the extent to which the city attracts people aiming to turn the city into the centre of their life at least in the medium term, respectively to avoid the city when the balance is negative. In this connection the term attractiveness is to be understood in a broad sense and includes also an economic feature, i.e. the city as a place of employment.

#### 2.2.5. Technology and innovation potential

According to the theoretical perspectives presented in the Section 1.2.2. it would be appropriate to develop a series of indicators reflecting four main axes:

1. Working in the Information Society (organisational awareness, particularly in SMEs, working practices)
2. Employment in the Information Society (education and training)
3. Cohesion (increased access and use of ICTs across all sections of society)
4. Access to Public Sector Information (ICT strategies and data infrastructures at the local level).

The first axis requires detailed local surveys of large firms and SMEs equivalent to the national surveys conducted in the UK for the Department of Trade and Industry "Benchmarking the UK in the Information Age", in which 500 firms were surveyed in relation to their awareness of ICT issues, availability and use of IT infrastructure and software (<http://www.isi.gov.uk/isi/bench/index.htm>). Similar surveys are also needed for the fourth axis (Craglia and Signoretta, 1999).

The second axis refers mainly to education and training. A useful indicator in this respect can be the number of graduates, as there is a clear correlation between the creation of jobs in the information-based industries and proximity to a pool of qualified graduate labour. This indicator has also the advantage of being easy to collect and update. The disadvantages is that transnational comparison are not always easy due to the differences in educational systems, and that this variable does not cover the increasing number of training initiatives that are likely to play a major role in bridging

the skills gap in the future.

The third axis should include both indicators of stock (numbers of telephones, computers, and access points to the Internet), and of flow (Internet traffic and volume on the communications networks). Unfortunately many of the desirable indicators are hampered by the regime of deregulation and privatisation that characterise this industry. Whilst benefits to the users have accrued by the increased competition, commercial sensitivities are hampering the collection of data. For example, enquiries on the number of cellular phone customers in selected cities, has only resulted in the following:

*Having researched your question of ownership in Birmingham, Sheffield, and Nottingham, we have found the sample size to be too small to take the figures down to specific towns. I hope it will help to tell you regional information as follows: East and West Midlands: mobile phone ownership 16% of population (of which 36% Cellnet), Yorkshire and Humberside 13% of population (of which 35% Cellnet). (source: Cellnet, 22/9/1998)*

Another issue is that it is difficult in this dynamic sector to measure the substitution effects. For example, the number of installed telephone lines which has traditionally been used as a measure of accessibility to services (see for example CEC, 1994), may now be underestimating the impact of mobile phones and fixed aerial telephony, such as Ionica in the UK which is providing lines not via cables but via fixed dish. Finally, in relation to Internet access and flows, whilst it is possible to monitor traffic originating from academic or governmental institutions, it is almost impossible to establish the geographical location of traffic linked to domains such as “.com”, or “.co.uk” (Craglia, 1996).

With these considerations in mind, the proxy variables used in this study include the number of hardware and software shops, as an indication of stock, and the number of hits on the World Wide Web for the cities under studies, as a crude approximation of flow. These indicators are far from satisfactory but they provide a first pragmatic solution whilst more informed sources of data come on stream.

### 3. Data analysis

#### 3.1. Choice of Indicators

The aim of this report is not to compare data for different indicators and different European cities. As we point out in the previous chapters other larger research project going on by the EU are interested in this objective. This report is more methodological and oriented to test the empirical construction of the indicators, mainly in terms of data availability and reliability in few cases-studies or considering international available data-bases, than to analyse their effective comparability and interpretation. Main indicators taken into account for different concerns are:

#### Socio-economic development

Indicators:

- rate of unemployment
- percentage of not owned housing

#### Services availability

Indicators:

- beds in hospital per 100,000 inhabitants
- cinemas and night clubs per 100,000 inhabitants

#### Internal disparities

Indicators:

- % of dwellings without bath
- % of population with no qualification
- % of workers
- % wage earners
- % of unskilled

#### Attractiveness

Indicators:

- holiday residences per 1,000 dwellings
- open-space areas per inhabitant in m<sup>2</sup>
- migration flow (immigrant - emigrant)
- registered nights in the hotels per 100,000 inhabitants

#### Technology and information society potential

Indicators:

- presences of the city on the World Wide Web
- computers shops per 100,000 inhabitants

As discussed later, not all indicators have been tested on all cities, but a selection was made based on the resources available. It must be also pointed out that comparative analysis has been carried out only for some indicators and cities already part of a comparative data-base, while differences in the operative definitions of other urban indicators in different countries prevent comparability within the framework of this study.

### 3.2. Criteria for the selection of the cities analysed

Different criteria have been applied for the selection of the case-studies. In Germany and Italy, a rich data-base on the quality of life in cities with more than 100,000 inhabitants (Table 5), constructed by Nuvolati and Schweikart (1995), was used as the main tool to test the viability of the indicators proposed. This analysis has been supplemented in Germany by focusing also on three cities chosen on the following criteria: the size represented by the number of inhabitants and the economic situation represented by the unemployment rate. Furthermore, one city should be located in East Germany. Table 4 shows the distribution of the 100 largest German cities by size.

Tab. 4 - The 100 largest German cities by size 1998.

Inhabitants	Number	Sum of inhabitants in 1000	% of German population
> 1,000,000	3	6,307	7.7
500,000 – 1,000,000	9	5,523	6.7
200,000 – 500,000	27	7,653	9.0
100,000 – 200,000	45	5,885	7.2
< 100,000	16	1,411	1.7

Source: Deutscher Städtetag 1998 and 1999

Three types of cities have been selected: with more than 1 million inhabitants, with approx. 500,000 inhabitants and with about 100,000 inhabitants.

Tab. 5 – German and Italian cities included in the data-base.

German Cities	Italian cities
Aachen	Alessandria
Augsburg	Ancona
Bergisch-Gladbach	Bari
Bielefeld	Bergamo
Bochum	Bologna
Bonn	Bolzano
Botrop	Brescia
Braunschweig	Cagliari
Bremen	Catania
Bremerhaven	Catanzaro
Darmstadt	Cosenza
Dortmund	Ferrara
Düsseldorf	Firenze
Duisburg	Foggia
Erlangen	Forli'
Essen	Genova
Frankfurt am Main	La Spezia
Freiburg i. Br.	Latina
Fürth	Lecce
Gelsenkirchen	Livorno
Göttingen	Messina
Hagen	Milano
Hamburg	Modena
Hamm	Napoli
Hannover	Novara
Heidelberg	Padova
Heilbronn	Palermo
Herne	Parma
Hildesheim	Perugia
Ingolstadt	Pescara
Karlsruhe	Piacenza
Kassel	Pisa
Kiel	Ravenna
Koblenz	Reggio di Calabria
Köln	Reggio nell'Emilia
Krefeld	Roma
Leverkusen	Salerno
Ludwigshafen	Sassari
Lübeck	Siracusa
Mainz	Taranto
Mannheim	Terni
Mönchengladbach	Torino
Moers	Trento
Mühlheim a. d. Ruhr	Trieste
München	Udine
Münster	Venezia
Neuss	Verona
Nürnberg	Vicenza
Oberhausen	
Offenbach am Main	
Oldenburg	
Osnabrück	
Paderborn	
Pforzheim	
Recklinghausen	
Regensburg	
Remscheid	
Reutlingen	
Saarbrücken	
Salzgitter	
Siegen	
Solingen	
Stuttgart	
Ulm	
Wiesbaden	
Witten	
Wolfsburg	
Würzburg	
Wuppertal	

In each category a city with a high unemployment rate, i.e. over the national average, has been selected. Due to its particular situation, Berlin has been excluded from this pick: with nearly 3.5 million inhabitants and its special position as the developing capital of Germany it cannot be taken as representative. Hence, the following cities were chosen: Hamburg with more than 1.7 million inhabitants, Duisburg with approx. ½ million inhabitants and Dessau, a city with less than 100,000 inhabitants as representative of a small city in the Neue Länder.

In the context of the UK two criteria for selecting cities has been used: 1) urban areas in distress, and 2) different population sizes. The first criteria has utilised the 1998



Index of Local Deprivation by the Department of the Environment, Transport, and the Regions (DETR, 1998). This index has in fact three different levels. The first is a district-wide level which based on 12 variables focusing with economic conditions, low income, health, education, environment, crime, and housing. Most of the 12 variables have been updated to 1996-97 based on a variety of sources. By contrast, the other two levels which focus on the ward and the enumeration districts are all based on the 1991 census. They are nevertheless useful in conjunction with the overall district index to indicate elements of spatial concentration of deprivation. The 1998 index has been calculated for the 354 district authorities in England following the latest changes in local government boundaries. Table 6 shows the deprivation ranks of the three case-studies selected so as to represent a large city (Birmingham), a medium-sized one (Sheffield), and a smaller city (Nottingham).

Tab. 6 - 1998 Local Index of Deprivation.

	Birmingham	Sheffield	Nottingham
Population 1991	911355	482226	250161
Rank of district (out of 354)	5	25	16
Rank of Ward Intensity*	1	6	21

\* Ward Intensity indicates the average score of the 12 variables in the 3 worst wards in the district. Source: DETR 1998; OPCS, 1992

The three cities rank 5th, 16th, and 25th out of the 354 districts, (with 1 being the most deprived). They are therefore among the most deprived cities in England based on the average of the district as a whole. The second row in the table, shows their ranking based on the average score of the 3 worst wards in each district. This reflects the fact that deprivation occurs in certain pockets of the city, with some areas being particularly affected. This measure tries to capture this intensity of deprivation which may be otherwise masked by the averaging process across the district. Also in this respect, the selected local authorities feature among those with the highest degree of deprivation intensity.

The criteria for the selection of the three Greek cities have been *methodological* rather than empirical, because this project aims at methodological innovations. We chose the one city, Athens, for which national statistical services have the most complete series of data; a second city, Heraclio, representing the data availability for the rest of the Greek cities; and a third city, Mytilini in Lesvos, where local research could be undertaken, and data sources found in local authorities and other institutions could be assembled. The cities were chosen as representative to three very different city sizes, in order to give an idea about different life quality in the hierarchy of urban centres in Greece. However, they should not be taken to represent the respective city sizes, unless a broader research project broadens the sample of cities, at least for the small-town categories with different functions.

### 3.3. Construction of indicators

#### 3.3.1 General socio-economic development

The potential of the socio-economic indicators can be demonstrated by means of the analysis of the following two examples: the unemployment rate on the one hand and the share of dwellings occupied by their owners on the other hand. The main emphasis of the description is put on the comparison between the cities in Germany and Italy.

Tab. 7 - Examples for socio-economic indicators for Italian and German cities with more than 100,000 inhabitants.

#	Indicators	Germany		Italy	
		Mean	CV	Mean	CV
1	Unemployment in %	10.98	22.94	16.86	61.37
2	Youth unemployment in %	12.68	13.86	36.02	55.04
3	Female employment in % <sup>1)</sup>	42.47	10.84	36.96	26.39
4	Income <sup>1) 2)</sup>	23588.09	12.05	13.52	22.01
5	Jobs in industry	18.18	40.45	9.45	44.08
6	Jobs in services	27.82	34.98	30.14	20.77
7	Housing surface per dweller in m <sup>2</sup>	34.26	4.82	33.34	10.93
8	Owner of dwellings in %	24.56	26.83	61.24	9.29

CV: Coefficient of variation in %

Data between 1989 and 1994

<sup>1)</sup> Absolute data are not comparable

<sup>2)</sup> Germany in DM, Italy in Mio. LIT

Table 7 shows selected socio-economic indicators for Germany and Italy yielding considerable differences between the two countries. All average values of the indicators are clearly less favourable in Italy except from jobs in the service sector. In the following, two indicators will be given more attention.

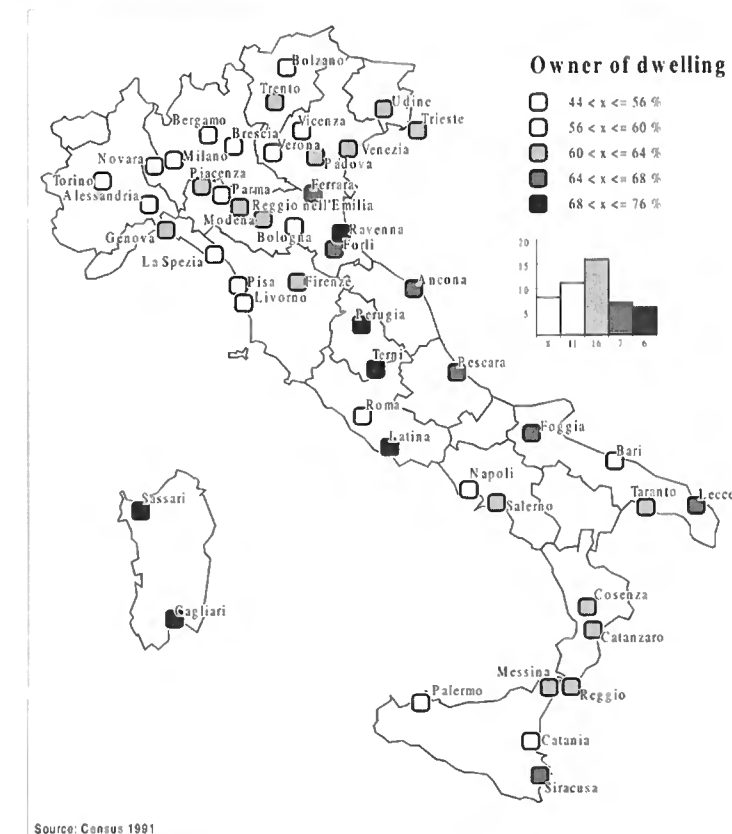
**Unemployment rate and youth unemployment.** The difference between the unemployment rates is most striking. The values are clearly higher in Italy, in particular the rate of youth unemployment being at 37% is three times higher than in Germany. In Italy, unemployment shows a high coefficient of variation. This means that there are significant spatial differences. If the spatial distribution of unemployment is analysed, both indicators of unemployment show a strong drop between the northern and the southern regions of the country. It turns out that these indicators adapt themselves to the idea of Italy being divided into three parts. Cities situated in the so-called Third Italy, i.e. in the central and north-western part of the country, have the lowest unemployment rate. The cities of this region such as Parma, Modena, Reggio Emilia have also the lowest rate of youth unemployment.

The values applied for Germany only include cities situated in the Alte Bundesländer. The spatial disparities are not of such a marked degree compared to Italy. Nevertheless clear spatial structures can be recognised. In the Alte Bundesländer as well there is a strong drop between the North and the South. Apart from a few exceptions, in the ancient industrial regions such as the Ruhr Region the unemployment rate is the highest one in Germany whereas in the southern regions it is the lowest. The second indicator, the young unemployed, does not comply with this model. A clear structure of the data distribution cannot be identified.

In Italy the indicators "unemployment rate" and "youth unemployment" correlate to a most significant extent ( $r=0.99$ ). In Germany however, there is no prominent statistical correlation ( $r=0.10$ ). In Germany the data of young unemployed show a considerably lower coefficient of variation in comparison with the total unemployment rate. The spatial distribution is subject to a completely different spatial pattern. It is of great interest that nearly all cities in the south of Germany show values over the average, except from Munich, Erlangen and Heidelberg. The Ruhr Region has a heterogeneous structure where cities with a high rate of young unemployed are rather scarce.

**Dwelling owners.** A most striking difference between Italy and Germany consists in the share of dwelling owners. In Italy the share of those living in a home of their own reaches 61% and is thus two times higher than in Germany where the rate comes to almost 25%. Even the lowest value in Italy, 44% in Naples, is higher than then the highest one in Germany reaching 43% in Reutlingen. In Italy the share of dwelling owners is the largest in the city centres and on Sardinia. Also in the southern regions of the country the correspondent rate of most cities is over the average and thus higher than in the North (Fig. 2). Basically this is due to the following two facts: in general the real-estate prices are notably higher in the North than in the South. Moreover, real estates in large cities such as Milano and Turin are more expensive and is therefore an obstacle to the creation of residential property. In the southern regions the more favourable real-estate prices on the one hand and the cohesion of large families on the other hand are the essential factors that encourage the creation of residential property. Although in the southern districts the income is below the average and a high percentage of workers is unemployed, the share of home owners is nevertheless high. The economic disadvantages are compensated by a high degree of self-construction so that the costs of new residential housings are kept down. Subsequently also families with a low income are in a position to create residential property.

Fig. 2 - Share of dwelling owners in Italy 1991.



In Italy the share of dwelling owners is not only higher but also their distribution to the cities is more homogenous than in Germany. Here the coefficient of variation is three times higher than in Italy. In Germany the lowest rates of owners can be identified in large cities such as Frankfurt where the relevant quota comes to 12.3%.

Besides the price level for real estate it is also the migration behaviour that has a certain influence on the share of dwelling owners. On the one hand workers from the South of Italy migrate to the North due to better job opportunities. They do not have the necessary funds to buy a dwelling. On the other hand the society in the North of Italy is more dynamic and mobile. Changes due to job opportunities are more common than in the South so that living in rented accommodation is frequently preferred. The existing dynamic and many jobs in senior positions correlate with a low rate of residential property. This indicator is accordingly low in dynamic centres like Milano and Turin in the North respectively Naples and Palermo in the South. In German cities like Frankfurt, Düsseldorf and Hanover the situation is similar.



**Unemployment and migration.** These indicators have been tested specifically on the three cities of Hamburg, Duisburg, and Dessau. As shown in Table 8, there are clear differences between these three cities. In particular the indicators in respect of unemployment and migration perceptibly express the urban problems. The city of Dessau is a typical representative of East German small cities. Until today these cities have to contend with the loss of industrial jobs. Only a few cities have managed to create new jobs in promising industries. In consequence, the population of these cities migrates to other places. Between 1991 until 1995 in Dessau the migration rate amounted to -5.4 per 1,000 inhabitants on average. It has to be mentioned however, that we are dealing here with a selective type of migration because mainly young people of employable age decide to leave. The migration is not compensated by the natural population development but rather intensified. In East Germany the birth rate has considerably fallen after the German reunification so that in most cases the death rate exceeds the number of births. As a result Dessau has suffered severe losses in population, so that from formerly over 100,000 inhabitants almost 86,000 are left.

**Tab. 8 - Indicators of socio-economic conditions and migration for the selected German cities.**

Indicators	Date	Dessau	Duisburg	Hamburg
Population (,000)	1998	86	525	1,700
- unemployment rate	Feb 1999	22.5	15.8	11.2
- % of dwellings owners	1995	19.7	17.8 <sup>A</sup>	17.3 <sup>B</sup>
- migration rate <sup>C</sup> per 1,000 inh. (average)	1991-1995	-5.4	1.0	9.6

<sup>A</sup>: 1993 <sup>B</sup>: 1987 <sup>C</sup>:(immigrants - emigrants)

In Hamburg the situation is completely different. In opposite to Dessau and to the consistent migration balance in Duisburg, in Hamburg more people migrate to the city than migrate from it. The growth due to migration amounted to almost 1% per year within the observation period, a fact that underlines the high dynamic of this town. The unemployment rate is clearly below the according percentage of the two comparative cities however, is considerably higher than the rate of most cities in South Germany. The economic dynamic of Hamburg is reflected also by the high percentage of self-employers.

Socio-economic and migration indicators were also tested for the UK case-studies. As seen in Table 9, in this case, there are no significant variations between the three selected cities, except that the unemployment ratio between males and females in Birmingham is significantly higher than in the other two cities.

**Tab. 9 - Indicators of General Socio Economic Development.**

	population	% unemp. males	% unemp. females	% with own house
Birmingham	911,355	15.88	7.84	60.1
Sheffield	482,226	17.24	10.37	56.8
Nottingham	250,161	18.94	10.30	51.9

Source: 1991 Census

From the Table 10 it is worth noticing that all areas have been losing population with a significant level in Birmingham (-5%), and that in the case of Nottingham the data available refers to the county and not the city. The counter urbanisation trend has been well documented in the UK and is confirmed by these

figures.

**Tab. 10 - Migration flows.**

Birmingham						
	1993	1994	1995	1996	1997	1993-97/1991
males	-3729	-4067	-4217	-4567	-5685	-2.44
females	-3941	-5062	-4716	-4807	-5543	-2.64
persons	-7670	-9129	-8933	-9374	-11228	-5.08
Sheffield						
	1993	1994	1995	1996	1997	1993-97/1991
males	-173	-1090	-928	-897	-552	-0.75
females	-643	-1062	-1131	-963	-601	-0.91
persons	-816	-2152	-2059	-1860	-1153	-1.67
Nottinghamshire						
	1993	1994	1995	1996	1997	1993-97/1991
males	595	-99	-383	-886	-826	n.a
females	127	-78	-541	-1142	-490	n.a
persons	722	-177	-924	-2028	-1316	n.a

Source: NOMIS.

### 3.3.2. Service availability

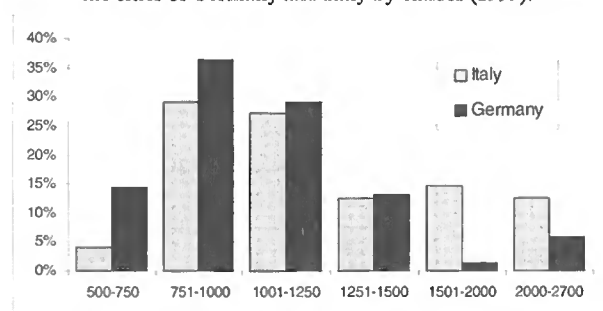
**Beds in hospital.** Table 11 shows the statistical values for beds in hospitals in all hospitals per 100,000 inhabitants in Germany and Italy. In both countries there is a considerable range between the data collected. When comparing the two countries, the difference between the statistical parameters is not too striking. Only the mean value in Germany is higher than in Italy. This fact is expressed in figure 3 showing the distribution of the cities according to the classified density of beds. The table reveals that the distribution structure in Germany substantially differs from the distribution in Italy. Above all in Germany the lower classes are occupied to a higher degree than in Italy. In total the distribution in Italy is more balanced.

When considering the beds in hospital, several effects become important. First of all it is the location of the city and its main function. On the basis of its location the dimension of the catchment area is defined. Large cities situated in direct vicinity to other large cities have in general a rather low density of beds. As example the cities of the Ruhr Region are situated very closely to each other and are part of a huge agglomeration. The density of beds in nearly all of these cities is very low. Another important criteria is the function of the city. In this connection the concentration of services in the large university towns with a faculty of medicine is particularly noticeable. Here the academic hospitals frequently offer diagnostic and therapeutic methods going beyond the range of services offered by general hospitals. In Germany cities with high density rates are almost exclusively university towns.

**Tab. 11 - Univariate data of beds in hospital per 100,000 inhabitants in the cities of Germany and Italy (1992).**

	Italy	Germany
Mean	1273	1078
Standard deviation	456	391
Coefficient of variation in %	36%	36%
Minimum	580 (Taranto)	609 (Wolfsburg)
Maximum	2340 (Brescia)	2629 (Heidelberg)

**Fig. 3 - Distribution of beds in hospital per 100,000 inhabitants in the cities of Germany and Italy by classes (1992).**



**Cinemas.** The number of cinema performances can be regarded as an indicator for our everyday culture. Table 12 shows the statistical values for the cities in Germany and Italy. The scatter parameters emphasise the great difference between the cities of the two countries. In Italy there is a drop between the cities of the North with many performances and those of the South where the number of performances is perceptibly lower. The standard deviation in Germany is in absolute terms higher but this is however due to the high absolute data values.

**Tab. 12 - Univariate data of performances in cinemas per 100,000 inhabitants and week in the cities of Germany and Italy (1994).**

	Italy	Germany
Mean	35.2	84.6
Standard deviation	13.7	46.0
Coefficient of variation in %	19.6	16.2
Minimum	14.0 (Taranto)	17.6 (Bottrop)
Maximum	70.2 (Bologna)	284.1 (Koblenz)

Regarding the indicator "cinema per 100,000 inhabitants", the difference between the three selected German cities is obvious. The high value for Dessau is particularly striking whilst this indicator is the lowest in Duisburg. For small cities already little shifts in the number of cinemas have an extreme effect as it is illustrated by the opening of a multiplex cinema in Dessau: the absolute number of cinemas has raised from 2 to 8 and the indicator has quadrupled. For this reason, this indicator appears not very suitable at least for smaller cities and should therefore be modified. It is uncertain to what extent the number of performances in cinemas could remedy this matter. The

number of seats related to the population or an indicator consisting of the number of performances and of seats promises to be more useful.

**Tab. 13 - Indicators of services availability for the selected German cities.**

Indicators	Date	Dessau	Duisburg	Hamburg
- beds in hospitals per 100,000 inhabitants	1998	1221	871	825
- cinemas per 100,000 inhabitants	1999	9.30	2.85	5.17

Indicators of services availability for UK cities do not show any major variation, particularly in respect to health. As for entertainment, Nottingham appears from this table to be better endowed than the other two cities in relation to the size of population.

**Tab. 14 - Average daily number of available beds in wards open 24 hours, and by thousand population, by NHS Trust aggregated to geographically linked Health Authorities, Nottingham, Sheffield and Birmingham 1997-98**

Health Authority	Total beds	Total beds per thousand population
Birmingham	5,402	5.32
Sheffield	2,516	4.75
Nottingham	2,901	4.52

Source: Beds data Department of Health form KH03, Population data ONS.

**Tab. 15 - Number of Cinemas and Night Clubs in selected cities**

	Cinemas	Night clubs	Population
Birmingham	6	32	911,355
Sheffield	6	20	482,226
Nottingham	5	25	250,161

### 3.3.3. Internal disparities

The indicators used here compose a picture of each Greek city (Tab. 16) and are appropriate for a comparison of the social conditions within the cities and disparities among them, as follows:

- Unemployment levels reflect registered unemployment only, and this should be borne in mind. Unemployment figures do not necessarily reflect a better quality of life, because there is disguised unemployment where populations are sheltered by the informal sector and income-sharing within the family (Leontidou 1990, 1993b) and do not register as such. However, unemployment figures are more pronounced in larger than in smaller urban Greek centres.
- There is a higher rate of owner-occupation in larger than in smaller Greek cities. This indicator does reflect a better quality of life as owner-occupied houses are usually not mortgaged.
- Dwellings without a bath do reflect substandard living conditions, and the figure is very much higher the smaller city. In this respect, quality of life is better in larger cities in Greece.

- The disparity between educated (university graduates) and illiterate population only marginally depends on city size in Greece. Though education levels do not reflect income categories, we could argue that there is a very sizeable middle class in Greek cities rather than a pyramid or a pear-shaped structure like the one posited for global cities (Sassen 1991). This indicator corroborates results of an earlier investigation, showing the pauperisation of the Athens large middle class, or homogenisation downward (Leontidou 1996b). In all respects, a large middle class is thought to be conducive to social stability, as a buffer between the rich and the poor, and can thus be said to reflect a better quality of life.
- The rate of workers in the economy is lower in Greek medium-sized cities. Exactly the reverse is true for the self-employed populations. However, it is today the case that the latter category includes a large variety of people, from petty entrepreneurs with high incomes to informal-sector casual workers, and can therefore say little about the quality of life in cities.

Tab. 16 – Indicators for Greek cities.

	Athens	Heraklio	Mytilini
<b>General data</b>			
Population of urban agglomeration	3,072,922	126,907	24,991
Population of Nomos (Prefecture)	3,523,407	264,906	104,620
<b>Internal disparities</b>			
Unemployment rate %	9.22 [2]	8.20	9.67
% of dwellings owners	76.71	71.15*	63.36
% of dwellings without bath	0.91	4.49*	10.96
% of population > 10 years old with university degree	8.39	8.09	7.29
% of population > 10 years old with no education	3.08	4.15	5.61
% wage earners (of working population)	65.98	21.15	61.91
% self-employed (of working population)	16.72	24.09	18.72

Sources: National Statistical Service of Greece (published and unpublished data, Census Data), National Tourism Organisation, and field work in Lesvos by the author.

Note: 1991 except where otherwise stated; [2] for 1992.

\* Nomos (prefecture) where data for urban agglomeration is not available.

For UK cities there are two considerations to make in respect to the data relating on internal disparities. First, we tried to capture gender issues by analysing the data by gender. In this respect, the inequalities are confirmed in the categories of graduates and postgraduates with almost twice as many males as females. Only the category “with qualification” which includes teachers and nurses see a predominance of females over males. Second, Sheffield appeared at the time of the 1991 Census to be significantly ahead of both Birmingham and Nottingham in relation to the level of available skills. How far this is still the case remains to be demonstrated with more up-to-date data. No data could be found on residents with no education.

Tab. 17. Indicators of Internal Disparities.

	% male postgrad	% females postgrad	% male with degree	% females with degree	% male with qualifications	% females with qualifications
Birmingham	1.32	0.48	6.25	3.68	4.02	4.79
Sheffield	1.80	0.74	7.24	3.96	4.93	6.18
Nottingham	1.35	0.47	6.09	3.91	3.40	4.36

Source: Census 1991

Tab. 18 – Workforce.

	Male Managers	Female Managers	Total	Ratio/1000 inh
Birmingham	1,730	933	2,663	2.92
Sheffield	2,851	1,476	4,327	8.97
Nottingham	700	372	1,072	4.29

	Unskilled occupations: employed males	Unskilled occupations: employed females	Total	Ratio/1000 inh.
Birmingham	911	1,086	1,997	2.19
Sheffield	556	846	1,302	2.91
Nottingham	328	391	719	2.87

	Managers/unskilled males	Managers/unskilled females	Managers/ unskilled total
Birmingham	1.90	0.86	1.33
Sheffield	5.13	1.74	3.09
Nottingham	2.13	0.95	1.49

Source: 1991 Census

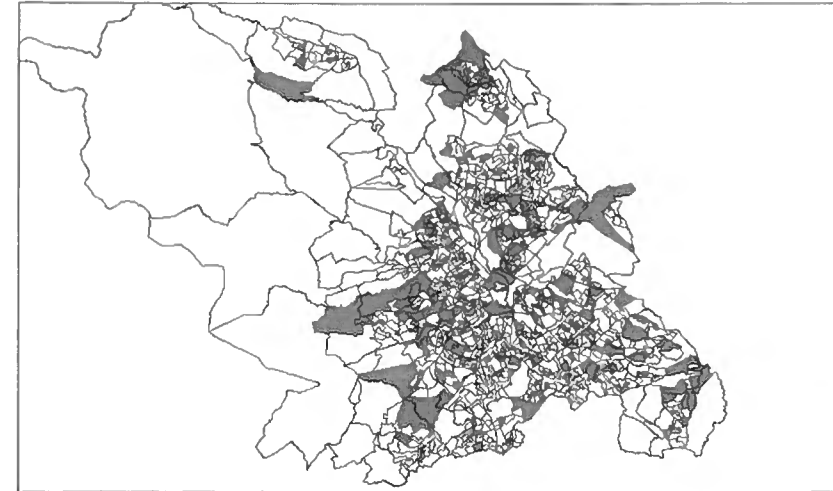
Two main features can be seen from the table above. Firstly, the gender gap is particularly strong in the managerial category with a ratio of approximately 2:1 for males, while there is balance or female dominance among the unskilled workers. This confirms the urgency of taking steps to address these imbalances particularly in the managerial positions. Secondly, the comparison among the cities suggests that Sheffield had in 1991 almost 4 times as many managers as Birmingham and twice as many as Nottingham in relation to its population size. While this maybe seen as a positive feature for Sheffield, the ratio between managers and unskilled workers indicates the extent of social differences in the city, particularly among men. Hence this indicator can be seen as quite effective in exposing the gender and social class differences in the cities under study.

An important issue in relation to internal disparities, relates to their concentration and dispersion over space. As argued in Section 2.2.3, GIS and the diffusion of spatial databases, make it possible to bring data coming from different organisations together in a way that was not possible until very recently. Whilst requiring careful consideration and clear policies to ensure that issues of privacy and confidentiality are not breached, these developments in geographic information can clearly benefit local governance and service delivery by exposing the areas in greatest needs and permitting the concentration of policies and resources in these areas.

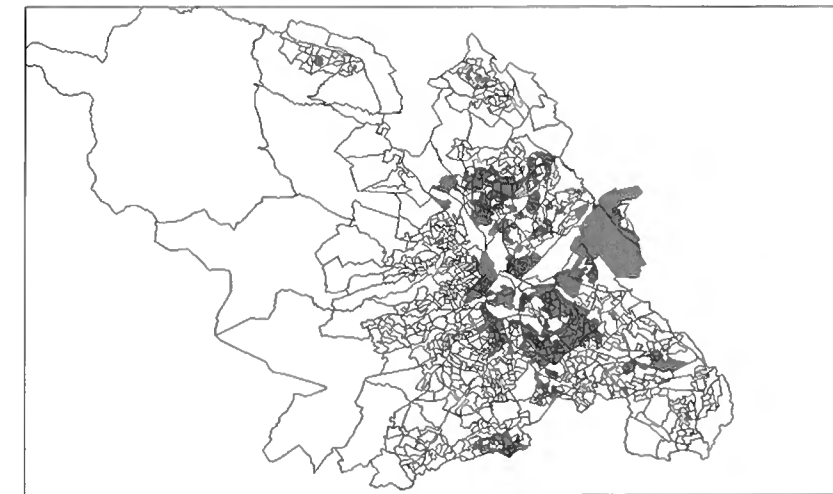
As a matter of example, Map 1 and 2 show the changes in material deprivation in Sheffield between 1981 and 1991 for each of the 1000 Enumeration District in the city (i.e. census areas, average population 400-500 people). The measure used here is the

Townsend Index of Deprivation, which is similar to the one computed by the Department of Environment, Transport, and the Regions and discussed in Section 3.2. This is a *relative* measure of deprivation, i.e. it is calculated (in this case) against the average for the city as a whole. What the maps show is that even though relative deprivation declined in Sheffield between 1981 and 1991, it has concentrated spatially in two main areas, one North and one South of the city centre. These shifts are illustrated more clearly in Maps 3 and 4, which focus on the central area. This clearly indicates the crucial importance of moving away from the exclusive focus on city-wide indicators (which are nevertheless useful for EU-wide comparisons) in favour of a more geographically target analysis and intervention.

**Map 1: Most Deprived Areas in Sheffield 1981,  
(Townsend Deprivation Scores, Top Quartile)**



**Map 2: Most Deprived Areas in Sheffield 1991,  
(Townsend Deprivation Scores, Top Quartile)**



**Map 3: Central Area of Sheffield 1981 .**  
(Townsend Deprivation Scores, Top Quartile)



**Map 4: Central Area of Sheffield 1991**  
(Townsend Deprivation Scores, Top Quartile)



### 3.3.4. Attractiveness

In Table 19 the statistical data of two indicators for the cities in Germany and Italy are compiled. The function of the indicators is to give a statement concerning the attractiveness of these cities. The first indicator is the number of holiday residences related to the total number of dwellings of the city. A high percentage of holiday residences indicates also a high degree of attractiveness of the city as a holiday destination. As the second indicator the share of urban open-space areas has been selected.

**Tab. 19 - Examples for indicators about attractiveness for Italian and German cities with more than 100,000 inhabitants.**

Indicators	Germany		Italy	
	Mean	CV	Mean	CV
Holiday residences per 1,000 dwellings	2.32	14.50	26.73	19.58
Open-space areas per inhabitant in m <sup>2</sup>	25.94	19.91	9.33	21.83

Data between 1987 and 1994

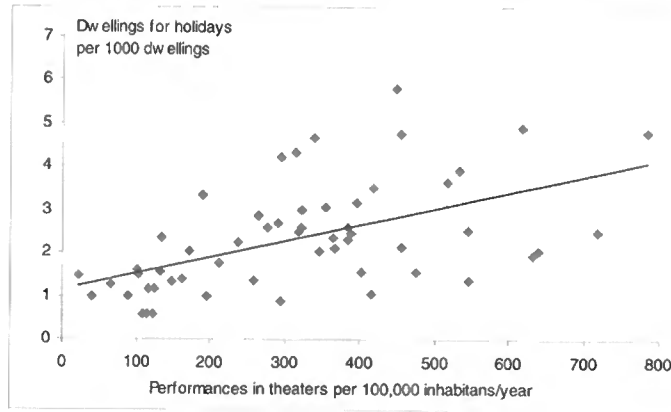
For both indicators there are considerable differences between the cities of the two countries. On this occasion, the comparability of the indicators has to be commented on in a few brief words. Differences in survey design and in the definition of indicators have a strong influence on the values. For this reason, in many cases a comparative interpretation is possible only to a restricted extent.

**Urban Recreation Areas.** Some of the differences result from the national survey programmes. This applies in particular to all area details. In Italy for instance there exists no area survey that corresponds to those carried out in Germany in 1989 and 1993. Therefore it is very difficult to define indicators relating to parts of the municipal areas such as the density of population which is calculated from inhabitants and built-up area. For this reason, a high degree of input is required to define this type of indicators in a country without any standardised area survey. One of the few available parameters concerning urban land development is the "recreation area" which is part of an environmental database (Legambiente 1994). However, the accurate definition of this term is missing and the survey method is not documented. Due to these circumstances this indicator in its absolute definition can not be compared to the according indicator in Germany.

It is however, possible to look at the data within the individual countries. In Italy the cities of the so-called Third Italy have the highest values Ferrara with 41 m<sup>2</sup> per inhabitant at the top. In Germany above all the industrial cities with many open-space areas achieve high values. The first two places are taken by Ingolstadt and Wolfsburg, two strongholds of the motor industry.

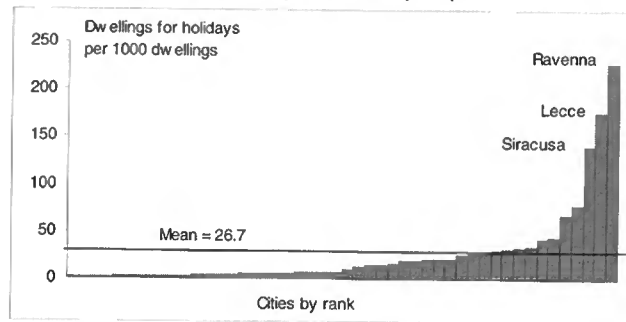
**Holiday Residences.** The share of holiday residences related to the total number of dwellings yields particularly interesting results indicating the degree of attractiveness of the city. Basically two components lead to a high percentage of holiday residences: on the one hand the attractiveness of the city with its cultural events and entertainment and on the other hand the scenic charm of the surroundings. It can be assumed that in most cases several factors are involved.

**Fig. 4- Correlation between holiday residences and performances in theatres in German cities with more than 100,000 inhabitants.**



In Germany the share of holiday residences is lower than in Italy. The analysis proves that a high rate of holiday residences can be found in cities with a very good supply structure in the cultural and entertainment sectors. These include in particular the traditional university towns like Heidelberg, Freiburg and Regensburg. In Germany the first places are taken by Lübeck and Munich. All cities in Germany with a high share of holiday residences show similar features. They provide many jobs in the service sector, above-average supply in view of cultural events and entertainment, historic town centres and in most cases an attractive scenery around (Fig. 4). The majority of the cities with good values are situated in the South of Germany.

**Fig. 5- Distribution of the Italian cities with more than 100,000 inhabitants by holiday residences (1991).**



The share of holiday residences in Italy is clearly higher than in Germany, nearly 27 per 1,000 dwellings on an average. The statistical distribution (Fig. 5) is characterised by a broad range whereas the three cities with the highest values are statistical outliers and can be identified as attractive holiday resorts due their outstanding position. In Italy the places with high values are all situated by the sea. The first places are taken by the three cities Siracusa, Lecce and Ravenna where almost 23% of all dwellings are used for holiday purposes.

**Nights in hotels.** The number of overnight stays related to the number of inhabitants is an indicator for the attractiveness of cities. Between the three selected German cities the indicators vary to a considerable extent. Hamburg, an attractive destination for tourists as well as for business travellers, ranks at the top in this respect. In Duisburg this indicator is notably lower due to the city being of little interest to tourists, whereas for Dessau it is relatively high.

**Tab. 20 - Indicators of attractiveness for the selected German cities.**

Indicator	Date	Dessau	Duisburg	Hamburg
nights in hotels per 100,000 inh./year	1997	146.879	48.024	255.606

It must be noted that for the UK cities, no data are available at city level referring to the number of nights in hotel. Only regional data for external visitors can be used.

**Migration flow,** despite indicators of attractiveness, have been already presented in section 3.2.1. in relation to the socio-economic development of the cities.

### 3.3.5. Technology and innovation potential

In this case, only UK data has been analysed as an example for the purpose of the study.

**Education.** Table 21 indicates the number of students in higher education in the three cities including both university students and those in the colleges of higher education. As shown, Nottingham has a particularly high student rate when measured per 1000 inhabitants, indicating the key role that higher education plays in the city.

**Tab. 21 - Students in Higher Education, 1998.**

	Birmingham	Sheffield	Nottingham
Population 1991	911,355	482,226	250,161
Students in Higher Education	62,119	70694	59,983
(source: UCAS 1998)			
Students/1000 pop	68.16	146.60	239.78

**Access and Use of ICT.** Whilst data on the number of mobile phones subscribers in each of the cities is still being investigated as a feasible indicator, table 22 gives the number of hardware and software computer stores and services in each city. The source of this data is the on-line Thompson Directory (an equivalent to the Yellow Pages). Whilst not every country may have this facility on line, and there are limitations on the accuracy of the data provided by the Yellow Pages (i.e. entry in the Yellow Pages is voluntary, and therefore not every service is included), there is little doubt that this data source is very rich and up to date, and available in paper or electronic format in most countries. Hence, it promises valuable information for the purpose of this study.

**Tab. 22 - Number of Hardware and Software Stores, 1998.**

	Birmingham	Sheffield	Nottingham
No. of computer shops (HW+SW)	88	48	71
Compshops/10,000 pop	0.97	1.00	2.84

Source: Thompson Directory On-Line

Again, it's worth noting the much higher rate of stores/10,000 population in Nottingham compared to the other two case-studies. This may be partly related to the higher number of students, but may also be a signal of a more vibrant ICT-based economy.

Whilst mapping of Internet flows is improving (see <http://www.geog.ucl.ac.uk/casa/martin/atlas/geographic.html>), it is largely an exercise in mapping the location of existing Internet providers, which is of limited use at for studies at the urban level. Therefore, as a proxy of the use and innovation potential of the three cities, their presence on the World Wide Web was measured using a range of search engines. Altavista, Excite, and Infoseek are three search engines that will try and match one or more words to the content of the Web sites they have indexed. The first attempt was to search for the name of the city without other specification. This does not work well because it also returns references to Cities with the same name located in different countries (e.g. the USA). Hence the query <cityname AND Great Britain> was used to limit the search to only the pertinent sites. Of the three engines, Altavista performed best. As a control, the same query was run with Yahoo, and the Yellow Pages which are based on categories rather than free text (i.e. they search the number of entries in their categories which include the name of the city). Table 23 summarises the results.

Tab. 23 - Internet Presence of the Selected Case-Studies, 1998.

	Birmingham	Sheffield	Nottingham
Hits with Altavista (name of city + GB)	8234	5524	5026
Hits/10,000 population	90.4	114.6	200.9
References to city with www.yell.co.uk	116	73	81
Refs/10,000 pop	1.3	1.5	3.2
Refs with Yahoo (name+GB)	153	144	190
Refs/10000 population	1.7	2.9	7.6

As the table above shows, Nottingham generally fares higher if not in absolute terms, certainly in terms of presence rates (i.e. in relation to population size), indicating a higher potential that the other two cities in respect to the opportunities opened up by the Information Society.

It should be stressed that these are only preliminary results to test the robustness of the methods and variables selected. Clearly, they need to be tested in a cross-national comparison, and the results need to be evaluated also in respect to some notion of national average, or average in a wide selection of cities. They nevertheless provide a first indication of how the identified need to include some dimension of the Information Society developments in the study of quality of life might be undertaken.

### 3.4. Future directions for the implementation of statistical data

#### 3.4.1. Urban populations

According to Martinotti (1993, 1996, 1998) contemporary cities are characterised by the presence of different urban populations. Not only residents but also, commuters, city-users and businessmen.

This new pattern introduced great changes in the organization of cities, but it is not totally disruptive of their original structures. For one thing the *commuter population* spend most of the time in the central city secluded in working organizations and largely separated from the rest of the city population. Changes are indirect, affecting the socio-economic traits of urban regions, and creating problems in the superimposition of new functional entities on existing administrative subdivisions.

The increased mobility of people, combined with the availability of greater income and leisure, allowed the differentiation of a third population, the *city users*. Namely a population composed of persons moving to a city in order to use its private and public services: from shopping, to movies, to museums, to restaurants.<sup>7</sup> This is a swelling population that has increasing effects on the structure of cities and actually uses them in a rather uncontrolled way. There are cities that have a very small population of *inhabitants*, a slightly larger population of *commuters*, but a vast population of *city users*. Venice is the extreme case, but many other cities of the world experience phenomena of this kind. Contrary to *commuters*, *city users* make in fact use of the *public areas* of the city more often than not in a rather barbaric way.

Finally there is a small but very specialised population of *metropolitan businessmen*. People who get into central cities to do business and establish professional contacts: businessmen and professional visiting their customers, convention-goers, consultants and international managers. This fourth population, relatively small but growing, is characterised by having a considerable availability of both private and corporate money. It typically stays for a few days, but sometimes for more extended periods, but it is not a permanent population. It spends part of the time doing business, but part *using the city*, although at a relatively high levels of consumption. This is a population of expert urbanites, individuals composing it tend to know their way around, be very selective in term of shopping and hotel and restaurant use, as well as in the use of top cultural amenities, such as concerts, exhibitions, museums, but also saunas and gyms. Increasingly *business* and top level *tourism* go together.

From a methodological and statistical point of view these aspects relates to the necessity to construct new kind of urban indicators. They must be based not only on the availability of the services in relation to the inhabitants, but also oriented to analyse the problem of real accessibility of the services themselves due to the presence/concentration of these new population.

This step should be preliminary to:

- the analysis of the various paths of accessibility to the available services, related to the territorial organisation of the services as well as to the different geographic and socio-economic and position of the individuals.
- the application of common criteria for the definition of catchment areas in European cities for different types of services and users coming from different places.

7. While the term is similar, the meaning of this label is different from the one in Jansen-Verbeke (1985). Actually the Dutch scholar refers to the consumption patterns behaviour of city *residents*. See also Lichtenberger (1976).



### 3.4.2. Time

Time constitutes, from this point of view, an important perspective for the evaluation of the accessibility of the services. Time to go to the airport in the rush hours from downtown, time to wait for a medical visit, queue for a theatre ticket or for a sportive event, and so on can be considered as important indicators of quality of life in a city, despite problems linked to the availability of data.

The organisation of the private time as well as of the public one can be various and based on alternative socio-economic structures as well on informal individual life practices. In particular, during the last three decades time became one of the most important issues for analysing, on one side, living conditions and styles of the population and, on the other side, the urban policy actions developed in order to solve the emerging problems.

The origin of the studies can be found in the *time-budget analysis* and in particular in the research oriented to evaluate people *well-being* according to their use of the time. The main contributions to the subject include the work of Szalai (1972) in the seventies and continued over the years (Juster and Stafford 1985, Dow and Juster 1985), till the more recent studies (Gershuny, 1995). These studies are mainly aimed at researching the *availability of human time* and the set of factors that determine the effectiveness with which time is used as determinants of individual well-being. According to such a tradition, time opportunities and constrains can be considered as crucial aspects in determining quantity and quality of social relationships, consuming practices, labour activities and therefore constitute important variables for the definition of a new socio-economic budget not only based on the availability of money and goods but also on the integration of *market* and *non-market* resources, relational practices and networks. This approach for analysing living conditions should be implemented through comparative studies oriented to study the connections between the structure of services and transports, on one side, and the organisation of the family, on the other.

### 3.4.3. Technology

Focus on time increased recently and mainly in relation to the analysis of spatial mobility, relational and professional network, use of technological devices in the everyday life. Possible choices in use of time and tools are today part of a process of *trade-off* that regards several outputs like: commuting practices, level of information and participation, income and wage, family organisation and family costs and, more in general, life styles. In particular, technological goods (fax, cellular telephone, computer) are determining the rapid evolution of private and public life and ask for a more constant monitoring of the transformations. New survey research should insist on the analysis of level of confidence and competence of the people in performing modern *self-services* practices necessary to question the informative system or to auto-produce a service (card for consuming and banking, home robots, communications instruments). As a matter of fact, new form of inequalities and segregation are emerging. They are not immediately linked to socio-economic classes but rather to different patterns and opportunities in using modern technologies.

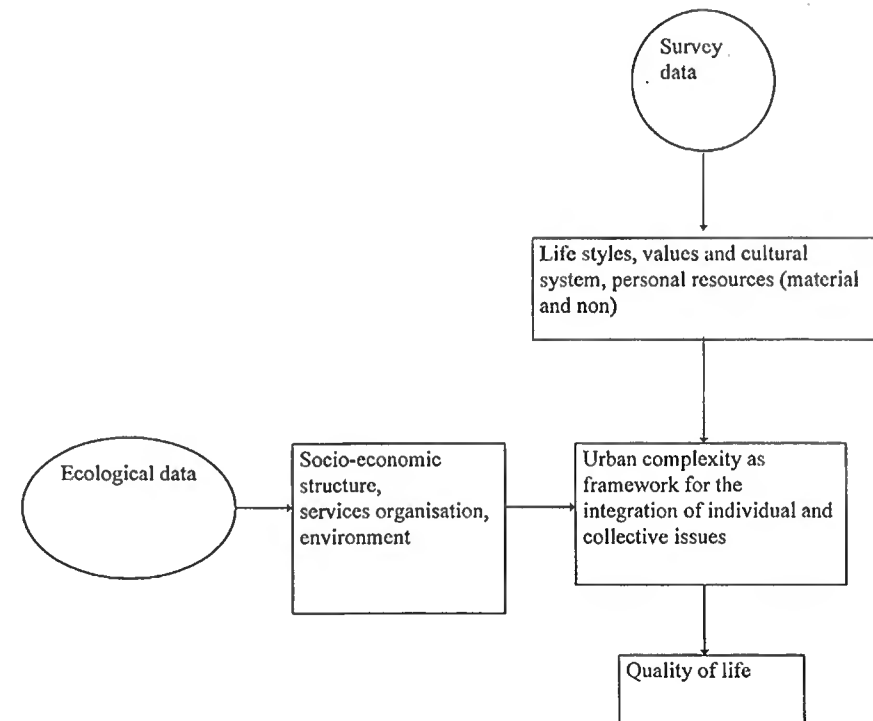
### 3.4.4. Directions for future research

To summarise our findings, future research on urban quality of life should be oriented to:

1. define and update new functional city boundaries,
2. define population living, working and consuming in the city,
3. evaluate time for moving and services using in the city,
4. develop survey on time-budget analysis,
5. develop survey on level of skill and competence in different groups of population in using technological tools,
6. develop survey focused upon the way in which social divisions among different social classes, races, ethnic groups, age and gender categories create different needs for life quality,
7. develop typologies of cities in distressed areas based not only on the classical socio-economic indicators but also on the new dimension here identified,
8. develop spatial information frameworks at city level enabling geographically focused analysis and policy implementation.

Survey data are crucial for constructing profiles of citizens dealing in different ways with structural system (resources and services) in order to improve their quality of life (Fig. 6). As many authors points out the combination of objective and subjective files of data will be fundamental for a better analysis of the living condition in the cities.

Fig. 6 - Individual and collective paths toward quality of life.





#### 4. Conclusions

This report has identified some of the key theoretical and methodological issues involved in defining and constructing quality of life indicators. The rapid evolution and transformation of the modern society make it necessary to up date the conceptual and the empirical approaches needed to study living conditions in the urban areas. In particular, quality of life has to be redefined considering disparities, *disamenities*, and all the contradictions linked to the socio-economic and technological development of the cities. From a more methodological point of view the evolution of the concepts also requires the identification and combination of both classical and innovative indicators able to measure in a more appropriate way the complexity of our society. Even the simple distinction between material and non-material human needs is no more sufficient to interpret quality of life. New analytical perspectives must be therefore drafted or improved. These mainly concern the evaluation of the intersection between collective services and opportunities, on one side, and individual capabilities in terms of competence, information, participation, integration, freedom of choice, on the other.

Contradictions of modern society as:

- competitiveness vs. social cohesion,
- attractiveness vs. standard of living of the local population,
- technology vs. exclusion and impersonal relationships,
- standardisation of communication vs. cultural differences,

must be permanently considered in urban studies on quality of life and should be analysed combining the objective-ecological approach with the more subjective one based on survey data. This goal are to be achieved in order to find out different living profiles characterising a complex urban society not merely based on the classical socio-economic differentiation but also on spatial and technological constrains and opportunities.

Several general contributions (Mega 1996, CEC, 1997) and specific case study (ALG, The London Study 1997) point out the relationships between competitiveness, equity and environmental sustainability of the cities in favouring better living conditions. As far as the contemporary and future society is going to be more and more fragmented, even polarised, methodological pattern finalised to study quality of life should be develop according to the definition of different strategies and practices performed by different groups of population in dealing with these aspects of the sustainability. New typology of citizen, based on the real *capabilities* gained by the people, should be therefore constructed. Of course, and especially in the distressed areas, this approach does not mean to reject the neo-contractualist interpretation of the society simply based on the identification of the disparities due to an unequal distribution of the resources. Indeed, it is oriented to find out how the socio-economic stratification of the population can be reinforced or reduced by different patterns of participation, education, information, and cultural orientation of the individuals. The challenge is to reduce disparities, recognize and protect differences and identity, guarantee communication on and participation in the decisional process.

Despite the methodological problems linked to the construction of the correspondent indicators, these issues will constitute reference points for policy intervention aimed at improving the quality of life in the European cities. One fundamental effort still to be performed is the definition and the computation of the urban population living, working and consuming in each European cities as basic

statistical data for the construction of new indicators related to the congestion, accessibility and transformation of our cities.

Some urban issues and related indicators have been presented in this report, and illustrated with a few selected case-studies. Their analysis constitutes only the starting point for coming debates on data availability and comparability required to finalise a set of indicators meeting the objectives of policy-makers. Many methodological problems are still open and are mainly related to the scarcity and low comparability of basic statistical data across country, or even across cities. Although perfect indicators for evaluating quality of life are very difficult to be constructed, we think that a more critical approach in defining indicators should be adopted, or at least should be performed in the interpretative phase.

## References

- Agnew J. and J. Duncan (eds) (1989), *The power of place: Bringing together geographical and sociological imaginations*, Unwin Hyman, London.
- ALG-Association of London Government (1997), *The London Study*, London.
- Anderson B. (1983), *Imagined communities: Reflections on the origin and spread of nationalism*, Verso, London.
- Andranovich G. D. and G. Riposa (1993), "Doing Urban Research. London: Sage", *Applied social research methods series*, 33.
- Allardt E. (1976), "Dimensions of Welfare in a Comparative Scandinavian Study", *Acta Sociologica*, XIX, 3.
- Allardt E. (1981), "Experiences from the Comparative Scandinavian Study, with a Bibliography of the Project", *European Journal of Political Research*, 9, pp. 101-111.
- Andrews F. and A. Szalai (eds) (1980), *Quality of Life: Comparative Studies*, Sage Publication, London.
- Bailly A., C. Jensen-Butler and L. Leontidou (1996), "Changing cities: Restructuring, marginality and policies in urban Europe", *European Urban and Regional Studies*, 3, 2, pp. 161-176.
- Barnes T and J. Duncan (eds) (1992), *Writing worlds: Discourse, text and metaphor in the representation of landscape*, Routledge, London.
- Benevolo L. (1993), *The European city*, Blackwell, Oxford.
- Berger J. (1972), *Ways of seeing*, BBC Publications, London.
- Berry J. and S. McGreal (eds) (1994), *European cities, planning systems and property markets*, E & FM Spon, London.
- Blacksell M. and A. Williams (eds) (1994), *The European challenge: Geography and development in the European Community*, Oxford University Press.
- Bradburn N. (1969), *The Structure of Psychological Well-Being*, Chicago, Aldine.
- Bradburn N. and D. Caplovitz (1965), *Reports on Happiness*, Chicago, Aldine.
- Brunet R. (1989), *Les villes européennes*, DATAR, Paris.
- Cantril H. (1965), *The Patterns of Human Concerns*, Rutgers University Press, New Brunswick.
- Carter H. (1995), *The study of urban geography*, Arnold, London.
- Castells M. (1997), *The power of identity*, Blackwell, Oxford.
- Castells M. (1998), *End of millennium*, Blackwell, Oxford.
- Cattan N., D. Pumain, C. Rozenblat and T. Saint-Julien (1994), *Le Système des Villes européennes*, Anthropos, Paris.
- Cheshire, P. and Carbonaro, G. (1996), Urban Economic Growth in Europe: Testing theory and Policy Prescriptions, *Urban Studies*, Vol. 33 (7), pp 1111-1128.
- Cheshire P., D. Hay, G. Carbonaro and N. Bavan (1988), *Urban problems and Regional Policy in the European Community*, Commission of the European Community, Brussels.
- Cheshire, P. and Hay, D. (1989), *Urban Problems in Western Europe: An Economic Analysis*, Routledge, London.
- Cicerchia A. (1996), "Indicators for the Measurement of the Quality of Urban Life. What is the Appropriate Territorial Dimension", *Social Indicators Research*, 39(3), pp. 321-358.
- Cleveland H. (1982), "Information as a Resource". *The Futurist*, 16, 34-39.
- Clifford J. (1992), "Travelling cultures", L. Grossberg et al. (eds).
- Cosgrove D. (1983), "Toward a radical cultural geography: problems of theory", *Antipode*, vol. 15, pp. 1-11.
- Cosgrove D. and S Daniels (eds) 1988, *The iconography of landscape: Essays on the symbolic representation, design and use of past environments*, Cambridge University Press.
- Commission of the European Communities (1993), *Growth, Competitiveness, and Employment. The Challenges and Ways Forward into the 21st Century*, White Paper, CEC, Brussels.
- Commission of the European Communities (1994), *Europe 2000+ Brussels: CEC*
- Commission of the European Communities (1996), *Living and Working in the Information Society: People First*, Green Paper, Draft 22/07/96, Final Com(96) 389, CEC, Brussels.
- Commission of the European Communities (1997a), *Towards an Urban Agenda for the European Union*, COM(97) 197 Final, Brussels, CEC
- Commission of the European Communities (1997b), *European Spatial Development Perspective*, First Official Draft, Brussels, CEC.
- Commission of the European Communities (1997c), *Sustainable urban development in the European Union: a framework for action*, Urban Forum, Special Edition, CEC, Brussels.
- Commission of the European Communities (1999) *Public Sector Information: a Key Resource for Europe*. Luxembourg: DG XIII
- Conti S. and G. Spriano (1989), *Urban Structures Technological Innovation and International Metropolitan Networks*, Fondazione Agnelli Torino.
- Coombes M., S. Raybould and C. Wong (1992), *Developing Indicators to Assess the Potential for Urban Regeneration*, HMSO, London.
- Craglia M. (1996), "Building Networks of European Researchers: GISDATA on the Internet", *Environment and Planning B*, vol. 23, pp. 489-500.
- Craglia M. and Signoretta P. (1999), "From Global to Local: the Development of Geographic Information Strategies in the UK" Paper presented at *the Second AGILE Conference*, April Università La Sapienza, Rome, 15-17.
- de Certeau M. (1984), *The practice of everyday life*, University of California Press, L.A.
- Department of the Environment, Transport and the Regions, (1998), *1998 Index of local deprivation*, <http://www.regeneration.detr.gov.uk/98ild/>
- Duncan J. (1990) *The city as text: The politics of landscape interpretation in the Kandyen Kingdom*, Cambridge University Press.
- Duncan J. and N. (1988), "(Re)reading the landscape", *Environment and Planning D: Society & Space*, 6, pp. 117-26.

Dow G. K. and F. Th. Juster (1985), "Goods, Time and Well-being: the Joint Dependence Problem", F. Th. Juster and F. P. Stafford (eds), *Time, Goods and Well-being*, Institute for Social Research, The University of Michigan, Ann Arbor.

Firey W. (1947), *Land use in central Boston*, MIT Press, Cambridge, MA.

Ford S. (1991), "Landscape revisited: a feminist re-appraisal", C. Philo (ed).

Ellin N. (1996), *Postmodern urbanism*, Blackwell, Oxford.

EUROSTAT (1992a), The statistical concept of the city in Europe. Luxembourg *Population and social conditions/Methods*, Series 3E.

EUROSTAT (1992b), *Labour Force Survey. Methods and definitions*, 3E.

EUROSTAT (1995), *Economic Accounts and Statistical Indicators at Regional Level*, European Infra-Regional Information System, Meeting of the Working Party, Luxembourg, 14-15 march.

Flood J. (1997), "Urban and Housing Indicators", *Urban Studies*, 34(10), pp. 1635-1666.

Fondazione Agnelli (1989), *Cities and Economic Development*, Torino.

Galtung J. and A. Wirak (1976), "Human Need, Human Rights and the Theories of Development", Unesco Workshop, *Applicability of Social Indicators to National Planning in Thailand*, Bangkok, 23 January.

Gershuny J. (1993), *L'innovazione sociale. Tempo, produzione, consumi*, Rubbettino Editore, Messina.

Gershuny J. (1995), "Usò del tempo, qualità della vita e benefici di processo", *Polis*, IX, 3, pp. 361-377.

Gerson E. (1976), "On Quality of Life", *American Sociological Review*, 41, pp. 793-806.

Giddens A. (1990), *The Consequences of Modernity*, Stanford University Press, Stanford.

Goodchild M. (1997), "Towards a Geography of Geographic Information in a Digital World", *Computers Environment and Urban Systems*, vol 21, pp. 380-392.

Graham S. (1997), "Cities in the real-time age: the paradigm challenge of telecommunications to the conception and planning of urban space", *Environment and Planning A*, vol. 29, pp. 105-127.

Gramsci A. (1971), *Selections from the Prison Notebooks*, International Publishers, New York.

Gregory D. (1978), *Ideology, science and human geography*, St Martin's Press, New York.

Gregory D., R. Martin and G. Smith (eds) (1994), *Human geography: Society, space and social science*, Macmillan Press, Basingstoke.

Grossberg L., C. Nelson and P. Treichler (eds) (1992) *Cultural studies*. Routledge, London.

Hall P. (1999). "The Future of Cities" Paper presented at the Round-Table on the Study Programme on European Spatial Planning, London, UCL, 19 April.

Hall S. (1988), *The hard road to renewal*, Verso, London.

Hall, P. and Hay, D. (1980), *Growth Centres in the European Urban System*, Heinemann Educational Books, London.

Handlin O. and J Burchard (eds) (1963), *The historian and the city*, MIT & Harvard U.P. Mass.

Harris C.D. and E. L. Ullman (1959), "The nature of cities", H. M. Mayer et al. (eds), pp.

277-860.

Harvey D. (1973), *Social justice and the city*, Edward Arnold, London.

Harvey D. (1985), *Consciousness and the urban experience: Studies in the history and theory of capitalist urbanisation*, Johns Hopkins Press, Baltimore.

Harvey D. (1989), *The condition of postmodernity*, Blackwell, Oxford.

Harvey D. (1996), *Justice, nature & the geography of difference*, Blackwell, Oxford.

Hauser S. and S. Lörcher (1973), "Lebensstandard und Sozialprodukt. Ein Vergleich BRD-Japan", *Konjunkturpolitik*, 2, pp. 81-116.

Heindrich M. (1998), "The changing system of European cities and regions", *European Planning Studies*, vol. 6(3), pp. 315-332.

Hoggart R. (1957), *The uses of literacy*, Chatto & Windus, London.

Hoyt H. (1937), *The structure and growth of residential neighborhoods in American cities*, Federal Housing Administration, Washington D.C..

Hudson R. and A. M. Williams (eds) (1999), *Divided Europe: Society and territory*, Sage, London.

Inglehart R. (1977), *The Silent Revolution*, Princeton University Press, Princeton.

Jacobs J. (1961), *The death and life of great American cities*, Random House, New York.

Jackson P. (1989), *Maps of meaning: An introduction to cultural geography*, Unwin Hyman, London.

Jansen-Verbeke M. (1985), "Inner City Leisure Resources", *Leisure studies*, 4, pp: 141-157.

Jensen-Butler C., A. Shakhar and J. van den Weesep (eds) (1996), *European cities in competition*, Avebury, Aldershot.

Jones, Emrys (1990). *Metropolis: the world's great cities*. Oxford U.P.

Juster F. Th. and F. P. Stafford (1985), "Introduction and Overview", F. Th. Juster and F. P. Stafford (eds), *Time, Goods and Well-being*, Institute for Social Research, The University of Michigan, Ann Arbor.

Kearns G. and C. Philo (eds) (1993), *Selling places: The city as cultural capital, past and present*, Pergamon Press, Oxford.

King R., L. Proudfoot and B. Smith (eds) (1997), *The Mediterranean: Environment and society*, Edward Arnold, London.

Korczak D. (1995), *Lebensqualität-Atlas*, Opladen: Westdeutscher Verlag.

Laborde P. (1994), "The spatial evolution of West European cities 1950-1990", M. Blacksell et al. (eds), pp. 109-126.

Lefebvre H. (1991), *The production of space*, Basil Blackwell, Oxford.

Legambiente (1994), *Primo rapporto di legambiente sull'ecosistema urbano*, Roma.

Landauer T. K. (1995), *The Trouble with Computers*, MIT Press, Cambridge, MA.

Leontidou L. (1990), *The Mediterranean city in transition: Social change and urban development*, Cambridge University Press.

Leontidou L. (1993a), "Postmodernism and the city: Mediterranean versions", *Urban Studies*, 30, 6, pp: 949-65.

Leontidou L. (1993b), "Informal strategies of unemployment relief in Greek cities: the

- relevance of family, locality and housing”, *European Planning Studies*, 1, 1, pp. 43-68.
- Leontidou L. (1994), “The future socio-economic profile of European capital cities”, *European Urban & Regional Studies*, 1, 1, pp. 78-79.
- Leontidou L. (1995), “Repolarisation in the Mediterranean: Spanish and Greek cities in neoliberal Europe”, *European Planning Studies*, 3, 2, pp: 155-72.
- Leontidou L. (1996a), “Alternatives to modernism in (Southern) urban theory: Exploring in-between spaces”, *International Journal of Urban and Regional Research*, 20, 2, pp. 180-97.
- Leontidou L. (1996b), “Athens: inter-subjective facets of urban performance”, C. Jensen-Butler, A. Shakhar and J van den Weesep (eds), pp. 244-273.
- Leontidou L. (1997), “Five narratives for the Mediterranean city”, R. King et al. (eds), pp 181-193.
- Leontidou L. and A. Afouxenidis (1999), “Boundaries of social exclusion in Europe”, R. Hudson and A. M. Williams (eds), pp. 255-268.
- Ley D. and M. Samuels (eds) (1978), *Humanistic geography: Prospects and problems*, Maaroufa Press, Chicago.
- Lichtenberger E. (1976), “The Changing Nature of European Urbanization”, B. J. L. Berry (ed), *Urbanisation and Counter-urbanisation, Urban Affairs Annual Review*, 11, Sage, Beverly Hills, pp. 81-107.
- Lichtenberger E. (1995), “Fachsitung 5: Die Zukunft der Stadt in Europa”, 49. *Deutscher Geographentag Bochum 1995*, Band 4, Franz Steiner Verlag, Stuttgart, pp. 183-186.
- Lineberry R. (1984), “Mandating urban equality: The distribution of municipal public services”, H. Hahn and C. Levine (eds), *Readings in urban and public politics*, Longman, New York, pp. 184-211.
- Loukaki A. (1997), “Whose *genius loci*? Interpretations of the ‘sacred rock of the Athenian Acropolis’”, *Annals of the Association of American Geographers*, 87, 2, pp. 306-29.
- Lötscher L. (1985), “Lebensqualität kanadischer Städte”, *Basler Beitr. zur Geographie*, 33, Basel.
- Lowenthal D. (1961), “Geography, experience and imagination: toward a geographical epistemology”, *Annals of the Association of American Geographers*, 51, pp. 241-60.
- Lynch K. (1960), *The image of the city*, MIT Press, Cambridge, Mass.
- Mayer H. M. and C. F. Kohn (eds) (1959), *Readings in urban geography*, Chicago University Press.
- Mega V. (1997), “European cities in search of sustainability”, *Young Planner Judge Urban Innovations*, Dublin, 21-22 November.
- Martinotti G. (1993), *Metropoli*, Il Mulino, Bologna.
- Martinotti G. (1996), “Which Data for the Mobile Metropolis?”, Istat/Eurostat, *International Conference on Economic and Social Challenges in the 21st Century: Statistical Implications*, Bologna, February 5-7.
- Martinotti G. (1998), *Third International MigCities Conference, Migrants and Minorities in European Cities*, session on “Sociodemographic data”, Milano, November 13<sup>th</sup>.
- McDowell L. (1994), “The transformation of cultural geography”, D. Gregory et al. (eds), pp.146-73.
- Mendenso A. A. (1986), “Yardsticks for measuring the success of service programs in Savannah”, *State & Local Government Review*, 18, pp. 89-92.
- Mingione E. (1991), *Fragmented societies: a sociology of economic life beyond the market paradigm*, Basil Blackwell, Oxford.
- Mohanty C. T. (1991), “Cartographies of struggle”, C. T. Mohanty et al. (eds).
- Mohanty C.T., A. Russo and L. Torres (eds) (1991), *Third world women and the politics of feminism*, Indiana University Press, Bloomington.
- Naess S. (1989), “The Concept of Quality of Life”, S. Björk and J. Vang (eds), *Assessing Quality of Life*, Samhall Klintland, Linköping, pp. 9-16.
- N.U.R.E.C. (ed) (1994), *Atlas of Agglomerations in the European Union*, Duisburg.
- N.U.R.E.C. (1995), “Report on Comparative Studies and Statistics of European Cities”, *Europolis*, Working paper, n. 3, Duisburg.
- N.U.R.E.C. (ed) (1998), *Die Zusammenhänge zwischen räumlichen Strukturmerkmalen, Meinungsbildern und Verhaltensmustern in sanierungs betroffenen Stadtteilen*, Duisburg.
- Nussbaum M. and A. Sen (eds) (1993), *The Quality of Life*, Clarendon Press, Oxford.
- Nuvolati G. (1993), “Qualità della vita. definizione, prospettive di analisi e indicatori sociali”, *Sociologia Urbana e Rurale*, n. 41, pp. 99-121.
- Nuvolati G. (1996), *Quality of Life in the Old European Cities Belt*, MZES - University of Mannheim, Commission of the European Communities.
- Nuvolati G. (1998), *La qualità della vita urbana. Teorie, metodi e risultati delle ricerche*, Franco Angeli, Milano.
- Park R.E., E.W. Burgess and R. D. McKenzie (1925), *The city*, University of Chicago Press.
- Philo C. (ed) (1991), *New words, new worlds: Reconceptualising social and cultural geography*, St David’s University College, Lampeter.
- Pickvance C. and E. Preteceille (eds) (1991), *State restructuring and local power: a comparative perspective*, Pinter Publishers, London.
- Population Crisis Committee (1990), *Cities, Life in the World’s 100 Largest Metropolitan Areas*, Washington.
- Poulain M (1997), *L’offre et la demande en matière de statistiques urbaines au sein de l’Union européenne*, GÉDAP, FNRS, UCL.
- Quick M. (1995), “Regional Units in Western Europe since 1945”, *MZES Working Paper*, Eurodata/nr. 5, University of Mannheim, Mannheim.
- Rheingold H. (1994) *The Virtual Community*. Minerva: London.
- Rupprecht R. (1993), *Lebensqualität. Theoretische Konzepte und Ansätze zur Operationalisierung*, Dissertation, Erlangen.
- Sassen S. (1991), *The global city: New York, London, Tokyo*, Princeton University Press, Princeton, NJ.
- Schorske C. E. (1963), “The idea of the city in European thought: Voltaire to Spengler”, O. Handlin et al. (eds), pp. 95-114.
- Schorske C. E. (1981), *Fin-de-siecle Vienna: Politics and culture*, Cambridge University Press.
- Shields R. (1991), *Places on the margin: alternative geographies of modernity*, Routledge,

- London.
- Soja E. (1989), *Post-modern geographies: The reassertion of space in critical social theory*, Verso, London
- Soja E. (1992), "Inside Exopolis: Scenes from Orange County", M. Sorkin (ed.), *Variations on a Theme Park*, Noonday Press, New York, pp. 94-122.
- Spanò A. (1989), "Benessere e felicità nella prospettiva della teoria della qualità della vita", *La Critica Sociologica*, 90-91, pp. 69-120.
- Szalai A. (1972), *The Use of Time*, Mouton and Co., The Hague.
- Tofler A. (1980), *The Third Wave*, New York, Morrow.
- Tuan Y.F. (1977), *Space and time: The perspective of experience*, University of Minnesota Press, Minneapolis.
- Webber M. et al. (eds) (1964), *Explorations into urban structure*, University of Pennsylvania Press, Philadelphia.
- White P. (1984), *The West European city: A social geography*, Longman, London.
- Wirth L. (1938), Urbanism as a way of life. *American Journal of Sociology*, 44, pp. 1-24.
- Zapf W. (1984), "Individuelle Wohlfahrt: Lebensbedingungen und wahrgenommene Lebensqualität", W. Glatzer and W. Zapf (eds), *Lebensqualität in der Bundesrepublik. Objektive Lebensbedingungen und Subjektives Wohlempfinden*, Campus, Frankfurt/Main, pp.13-26.
- Zukin S. (1988), *Loft living: Culture and capital in urban change*, Radius, London.
- Zukin S. (1991), *Landscapes of power: From Detroit to Disney World*, University of California Press, Berkeley & L.A..

Committee of the Regions of the European Union

**Evaluating the Quality of Life in European regions and cities  
Theoretical conceptualisation, classical and innovative indicators**

Luxembourg: Office for Official Publications of the European Communities

1999 — 70 pp. — 16 x23 cm

ISBN 92-828-7910-0

Price (excluding VAT) in Luxembourg: EUR 7

EUROPEAN UNION



# Committee of the Regions

Rue Belliard 79 - 1040 Brussels  
Tel. +32 2/282 22 11 - Fax +32 2/282 23 25  
<http://www.cor.eu.int/>

GF-25-99-205-EN-C

*EN*

Price (excluding VAT) in Luxembourg: EUR 7



OFFICE FOR OFFICIAL PUBLICATIONS  
OF THE EUROPEAN COMMUNITIES

L-2985 Luxembourg

ISBN 92-828-7910-0



9 789282 879108 >