

life quality
of senior citizens



in relation to
mobility conditions

frame of reference for the research instruments

deliverable D4

internal paper from WP2

University of Vienna, Institute of Sociology
Vienna, Austria
October 2003



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**University of Vienna, Institute of Sociology
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Preface

SIZE – “Life quality of senior citizens in relation to mobility conditions” (project number QLK6-CT-2002-02399) is a project in the framework of the specific research and technological development programme “Quality of life and management of living resources”, key action 6 “The ageing population and disabilities” in EU’s Fifth Framework Programme.

European policy regarding the elderly aims at maintaining their mobility. This is a central element of their integration in society. Senior citizens want to stay autonomous and independent as far as possible. Without the possibility to maintain mobility, senior citizens cannot lead an independent life, with many other problems, such as isolation and health problems as a consequence.

The project **SIZE** has a life-span of 3 years and is divided into 4 research areas: State-of-the art & preparatory activities, qualitative studies, standardised survey and finalisation & distribution of results.

The general objectives of **SIZE** are:

1. To explain and describe the present mobility and transport situation, the problems, needs and wishes of different groups of senior citizens from their own perspective compared with experts’ points of view (“experts” being sociologists, psychologists, traffic experts, experts on gerontology, architects and urban designers, urban planners, politicians, policy makers, experts of other related EU projects, etc.);
2. To motivate action by the authorities and other relevant groups in society who are, or feel, responsible in this area, among others by making discrepancies in problem identification transparent;
3. To identify relevant solutions for existing problems and to provide guidance for setting up and implementing policies aimed at “keeping the elderly mobile”.

14 partners from eight different countries are involved in SIZE:

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INTRODUCTION

This frame of reference has been constructed by trying to find out systematically the basic dimensions and categories and the relations between them in the relationship between mobility and life quality of elderly citizens. It is, in that understanding, not a summary of the main results; rather, within this frame most of the topics taken up in SIZE can be placed and related to each other systematically. This report will outline, how our frame of reference and the thereto associated ponderings lead to the use of the analysis methods that we have chosen.

The frame of reference is of an abstract character, on a so-called meta-level. Since some research areas, as for instance, the perception and behaviour of the elderly are investigated to a fuller extent than others, like the role and functioning of organisations and institutions dealing with traffic affairs, it has been necessary to follow a twofold strategy: a) where sufficient knowledge has been at hand it was possible to define categories and to suggest their usage in treating problems; b) where knowledge has been scattered or even lacking, factors and/or dimensions for further reflection were formulated that should, at least partly, be treated in SIZE.

The function of the frame of reference is to guide the interpretation of research material, to help formulating hypotheses, and, thereby, to achieve more codification of knowledge in the field. Its function is not primarily to give advice to single research activities within the project SIZE, but to function as a general guideline for all activities defined in the SIZE work packages. During the course of the project, all relevant work results will be packed into this frame. Thus, both semantic and empirical evidence will be summarised along a general logic of the SIZE research.

We see the frame of reference as a "work-in-progress". It will be discussed and elaborated on in the course of the project and will enter the final report as a sound piece of research work.

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1. A BASIC CONSIDERATION

Mobility is vital for maintaining personal independence and social integration. Lack of mobility can prevent older people from social and societal participation and it can lead to low morale, depression and loneliness. On the other hand, maintaining mobility can contribute to good quality of life in a remarkable way. Under the perspective of "environmental gerontology", three dimensions influence experience and behaviour of individuals: 1) to have control: to be able to lead one's own life independently; 2) psychological ability of resistance: the ability to cope with unexpected experiences and losses successfully; 3) competence in connection with everyday life: ability to fulfil activities of daily life even under restrictions and impairment. (see as an example of clear conceptualisation: Wahl H.-W., Oswald F., Mollenkopf H., 1999).

On the side of the individual, mobility is an option to surmount physical and social space. It is linked to the ability of spatio-temporal locomotion, and characteristic of a person. Whether people undertake spatio-temporal locomotion is, however, not only dependent on the physical conditions and psychic orientations of the people themselves. Mobility has also to be seen from a "transactional" perspective within which the idea of "competence" comes to the fore (see above). The individual and the environment (physical and social) are related to each other reciprocally.

When individuals become older, and if there are increasing losses and deficits linked to the process of ageing, the actual environment gains more and more specific relevance for the planning and the performance of daily life, involving all sorts of mobility. If the environment is shaped and arranged in a way that these changes among the elderly are taken into consideration carefully, losses and deficits become less important, or, at least, less limiting.

Without going into more details (they can be found in great variety in the "state of the art" report, Deliverable 3 of the project SIZE) it is obvious that mobility is anchored in the responsibility and the acting competence of the individual as well as in the societal system. The following outline is intended to contribute to the establishment of a methodology viz. a concept for research work within the project SIZE, especially for the purpose of interpreting data which represent empirically the relations of factors that are crucial for the understanding of mobility in old age.

The methodology developed here has three major functions: 1) It supports the systematic organisation of our existing knowledge. It can do so by supporting the formulation of hypotheses about existing facts and insights. 2) It is a general guide to the ongoing research. If research questions are formulated in terms of the main categories dealt with in the project the resulting propositions can in turn contribute towards a fuller and revised formulation of what is known already. 3) The methodology is a point of departure for specialised investigation in the field under observation.

Under these perspectives the outline presented here can be understood as a first step of codification of the results which have been found in the study of literature representing the "state of the art", thus producing structured space for the project results to be expected, especially those that will be derived from the application of interview instruments. This is relevant because the main problem connected to interview data is always their interpretation and the assessment of the validity of what is concluded from it.

2. GENERAL AND FUNDAMENTAL CATEGORIES

In this frame the point of reference of all elaboration is the relation between the individual and the social and physical environment. The individual is an acting unit that can be looked upon either as an individual actor or as a group of actors. The social environment is represented in the form of socio-cultural institutions and societal structures. The physical environment is represented in material and technical conditions inherent to a scientific-technical civilisation. Thus, each individual and each collective (group) has to be seen within its actual and longed-for relations with other actors or groups, institutions, and material-technical conditions.

There is a bulk of concurring and poorly defined terms in the literature used in different meanings by different authors. It cannot be a task of the project to find and develop a codified research language; however, it is useful to suggest basic categories or terms and to circumscribe their meaning supported by findings and hypotheses in the project. It should be self-evident that the following definitions and circumscriptions refer to the literature used to present the "state of the art". In order to illustrate the usefulness of the general and fundamental categories findings and hypotheses are taken directly from the quoted resources.

As it was said above, the basic idea is the relation between the individual and the environment. That relation is often structured analytically by four dimensions: competence of the individual, environmental conditions, adaptational behaviour, and level of mutual adaptation. However, it is easy to see that there are more dimensions and manifold relations which come out of the individual-environment context. Therefore, it seems useful to elaborate some of the basic notions.

2.1 The side of the individual

On the side of the individual there are basic categories to be taken into consideration when existing knowledge has to be organised. Research procedures are to be developed, and specialised investigations have to be designed.

2.1.1 Orientations of individuals

It is useful to discern between cognitive and emotional orientations. The extent of satisfaction with certain external conditions expressed verbally by an individual, for instance, is a cognitive judgement; the extent of happiness a person experiences is an emotional judgement or experience. (See, for instance, the discussion on "quality of life", especially on "subjective" quality of life, Deliverable 3 of SIZE)¹. Orientations in addition to their cognitive and emotional mode, are also of a cathectic quality, meaning that decisions and behaviour are lead by the principle to avoid negative experiences. The fact that older people who have difficulties to participate in traffic use withdraw from that public area can be interpreted under such a perspective.

Often we find ambivalence in the orientation of individuals. Senior citizens themselves are aware of the risk they face in traffic, although, on the one hand, they do so rather generally than subjectively (they think "the others" are endangered, not themselves), and they underestimate the peril of being pedestrian compared to driving. On the other hand, they worry more about their safety than the younger do about theirs, because they are likely to be more

¹ We will pay attention to that difference in orientations later by introducing the "mobility strategies" "comfort" and "attractiveness".

severely injured, take longer to recover, and suffer greater psychic impact than a younger person in a similar accident. It is also worthwhile to note that older people combine in their orientations toward the public space traffic safety and personal security (see below).

2.1.2 Competence

Competence is of physical, psychological, cognitive, and social character. They are not only an independent property of body and/or character, but they represent a potential which can be put into practice in relation to both facilitating and hindering conditions.

If schemes are demanded to help older drivers to adjust to changing lifestyles and declining driving abilities, it is exactly a question of changing competence and the necessity to support the people by both enabling learning processes and reshaping the environment. One of the crucial questions in that context is about the changing relations between the individual's habitualised behaviour and the changing quality of the physical and social space. Adaptation and design of urban spaces to the elderly can contain different aspects. However, whatever is done in designing the environment, it should be related to changing competence.

The way in which people move is strictly related to the activities they perform, to the environment in which they move, and to their relation with and the perception of it. The decision of the individuals about choosing different mobility modes, like walking, bicycling, car driving, using public transport, therefore, has to be seen in connection with the interconnectedness of performance, environment and the perception of it.

2.1.3 Needs

Needs are dispositions of want which influence expectations, actions, and perceptions of need fulfilment according to already experienced ways and means of need-satisfaction. One special need can be met by different modes and means and vice versa ("functional equivalence").

Need-dispositions can be of a very complex nature and when interpreting empirical findings it is useful to pay attention to that phenomenon. It is well known that older people complain, for instance, about the lack of pedestrian paths adapted to their needs: discontinuity and narrowness of pavements, full of pits and holes, blocked by cars and other obstacles, altogether making a walk a hurdle race. However, even when these people complain about a hundred problems in their district, they like it as it is and they do not wish or intend to leave because they were borne there, because they love it, because there are their friends and relatives, because their children have grown up there, etc. For purposes of planning and designing for the environment it is necessary, thus, to apply a holistic approach instead of selecting out single needs (which are seen as single needs but never exist as such).

2.1.4 Communication

Communication is social behaviour or interaction which includes not only verbal communication (the spoken word) but also symbolic and gestural interchange (eye-contact, hand-waving, etc.).

One aspect of communication in traffic which is often overseen relates to non-verbal communication. An observation of pedestrian's behaviour when crossing streets brought to the light the most interesting finding that the face-to-face communication between the crossing pedestrian and car drivers is not at all the main way of communicating: only one forth of the pedestrians tried to catch the driver's eye.

Besides that rather narrow perspective within which the focus is laid on direct interpersonal communication in traffic it is necessary to take into consideration a wider view which leads us to communication in public space of which traffic is only a part. Sociological studies clearly

underline that participation in the public space in general is reduced by withdrawing from participation in traffic because of anxiety, fear, impairments, or a hostile environment. To put it in short words: The preventing features of traffic and transport cause a decrease in communication and interaction in general.

2.1.5 Understanding

Understanding is a complex cognitive emotional process within which unknown or little known items are integrated into already existing bodies of knowledge and interpretation. "Understanding" contains the idea that habitualised perception and behaviour can be changed by contradicting experience or by intentional learning. It is very common to ask for training and traffic education for older people hoping that their participation in traffic could be improved. The problem, however, is that training programs and educational measures are often not adapted to the special conditions of learning among the elderly. Older people learn in a different way as compared to younger people. They need different learning contexts, they judge critically what they have to learn with regard to its sense, etc. Also, when they for instance move around as pedestrians, it does probably not make much sense to expect from them to adapt themselves primarily to traffic conditions which have been designed mainly to meet car mobility requirements. Efficient traffic education of the elderly is a very complex task, which requires the commitment of many institutions and individuals as well as a thorough consideration of scientific knowledge on adult learning.

On the side of the experts and decision makers there is also a lack of adequate understanding. Many measures, as for instance, implementing driving licence tests for people who become older are linked with the notion of chronological age. But in contrast to this, research has sufficiently proven that the influencing factor for mastering traffic participation is not in any linear way higher age. Much more important are the physical ability to move, the competence and routine of driving a car, and the availability of transport means.

Information-campaigns that do not consider such insights also have to be questioned with regard to their effectiveness.

2.1.6 Mobility

Mobility is defined as human spatio-temporal locomotion. It is usually goal oriented and has a subjective side under the perspective of needs and their fulfilment. As far as the mobility of the elderly is concerned, it is one starting point of SIZE to assume that it is strongly influenced both by individual and by societal features. Barriers as well as enhancing factors on the side of the individual and on the side of the environment are manifold and well documented. There is no need to go into further detail, here. However, it is necessary to see clearly the conflicting tendencies: More (car) traffic is forecasted, especially due to the mobility needs and the mobility behaviour of the senior citizens of the future; car ownership is essential for active and satisfying ageing. Simultaneously, an increasing lack of security and safety is expected which reduces mobility, especially in urban settlements. Analyses of the relation between traffic regulations and individual behaviour of participants show that in Western industrialised societies a culture of control and negative sanctioning is prevailing. However, influencing individual behaviour and changing behavioural patterns of traffic participants by more and ever detailed regulations does not appear to be a successful way. What is needed is self-responsibility, a policy of targeted and sufficient information, and a balance of interests between different groups and institutions. The predominant negative sanctioning does not lead to the expected learning processes among traffic participants. That tendency denies the principle of a "free choice" of transport mode.

2.1.7 Fear and anxiety

Fear and anxiety are modes of cognitive and emotional states or conditions which have the character of a "crisis". This means that available knowledge and practice are perceived as not being sufficient to manage a situation to such a degree that the organism is not endangered.

The problems most frequently reported in studies about locomotion with a special emphasis on car driving are: ruthless (other) car drivers, other car drivers driving too fast, and traffic jams (due, of course, to non-sensible behaviour of the others). In one study half of the respondents stated that other car drivers were the most annoying group of road users. 74% of the respondents stated that after resigning from driving they would cover the necessary distances on foot.

Other studies show similar and additional factors which lead to fear or anxiety: high speed of traffic, difficulties to cross streets, fear of accidents, high borders of pavements, bicycles on the pavement, badly cleaned walking areas (snow, ice), difficulties in reading signs. An overall hypothesis is: Reduced mobility caused by these factors in traffic leads to reduced well-being.

A topic which is usually not linked to safety in traffic is security in public space. Structural and personal violence against older people (increasingly) prevents them from going out and taking part in interaction in the public. Research emphasises that the elderly's experience related to mobility aspects is heavily influenced by not feeling safe in the streets, not only for traffic reasons, but also for reasons of undergoing offensive behaviour of others – verbal aggression, theft, etc.

2.1.8 Learning and compensation

Learning and compensation should be looked upon as a process within which new knowledge and abilities are acquired and losses of knowledge and abilities are substituted by different strategies that are useful for the development of successful practices.

The evaluation of an initiative ("Safe walking over 60"; c.f. Goethals, 2000) revealed that this project did not have the expected impact on elderly people. Although in 1998 they were more aware of existing risks than in 1993, the attitude towards measures of accident prevention and also their actual behaviour towards prevention did not change. But people who knew about the project (about 8 % of the respondents) were different; their attitudes and behaviour seemed to be influenced by the initiative. The hypothesis about why the initiative had so little success is: the public shared very little willingness to do something for elderly people.

In a project on reducing accident risks of elderly people a special topic became manifest. The biggest problem concerning training (psychological, theoretical or practical) is how to motivate people to participate. No matter where the training took place (old people's homes, seniors' clubs, adult education centres, driving schools) and how much advertisement was involved, the acceptance of such training was always low.

The seeming resistance of people to take part in programs - whatever the reasons may be – regrettably leads to suggestions of dubious character even on the side of experts: There has been stated that elderly people should avoid difficult situations in traffic e. g. rush hours, darkness, rain etc. Apart from the fact that, by following such a suggestion, older people would hardly be ever able to drive their cars in some parts of Europe, the serious question is provoked how democratically older people are treated in the system.

2.2 The environment

"Environment" is to be conceived in a twofold way: either it is a material-technical or a social environment. The difference is crucial because only the social environment can act, have intentions or can change conditions, the material-technical environment is only subject to human action.

2.2.1 The material-technical environment

From the literature representing the state of the art of SIZE many material-technical "objects" could be derived that are of importance for mobility and transport. They have to be considered in terms of their construction and usefulness under the perspectives of the users. Some seem to be of special importance, as for instance: Streets, pavements, tracks/rails, crossings, staircases, escalators, signs, lights (= infra-structure), and vehicles.

In order to understand the complex processes of mobility, within which these "objects" are only elements of a system, it is necessary to combine the material-technical conditions and the perception and behaviour of people. That combination leads to different more or less official goals that are connected to mobility: 1) Safety: is understood as safeguard from traffic accidents and security in the use of public space; 2) Accessibility of places, services, facilities, and transport modes; 3) Comfort: is a combination of physical well-being related to the conditions in immediate reach which are relevant for sensual experience, and psychic well-being related to the quality of the mobility processes; 4) Attractiveness: the extent and quality of appeal of outdoor spaces, related on the one side to their capability of hosting or starting activities, and on the other side to social involvement; 5) Intermodality: the integration and interchangeability of different modes and means of mobility and transport; 6) Technological Fit: the adaptation of the material-technical environment to standards of new and successful developments including the provision of real time information.

Technological development has made it possible to relay real time information via the Internet, SMS and WAP telephones. In a short-term perspective the question is whether older people using public transport will be able to afford such technology, be interested in it, or be able to use it. There is a risk that it may become a further case of exclusion for those who are not able to afford, understand or use the technology.

From a sociological as well as a psychological point of view, these mobility strategies lead to certain effects in the experience and the behaviour of individuals which contribute to their quality of life. They require contributions from the side of the environment which are oriented to the needs of people like, to start with, comprehensiveness of analysis and planning.

Strategy	Effect
Safety	Maintaining Life and Health
Accessibility	Successful Coping
Comfort	Well-Being
Attractiveness	Satisfaction of (aesthetic) Needs
Intermodality	Full Use of Space
Technological Fit	Reduction of Costs in Problem Solving

The relations between strategies and effects are not unilateral and one-dimensionally directed but manifold and mutually interacting; all these relations are underlying the individual-environment context.

2.2.2 The social environment

The social environment consists of actors, groups and institutions. They can overlap in their acting. From the literature representing the state of the art (SIZE Deliverable 3) the following main actors have been identified: government, legislation, administration, authorities (mostly local), media, educational system, vehicle producers, (other) road users, personnel (technical, executive, service), representatives of political parties and unions.

It is difficult to deduce general insights from the literature about the role and the behaviour of the social environment concerning mobility of the elderly. Whereas older people and their behaviour are investigated on a considerable range, almost nothing is known about the public actors.

Research on elderly and their mobility shows some similarities to other branches of social-scientific investigation; huge amounts of isolated research projects are carried out under a "subjective" perspective. However, there is a considerable lack of connecting objective living conditions and subjective experience and behaviour. The inner life of organisations and institutions that are responsible for traffic matters is by no means obvious on the ground of empirical and theoretical results. It is in some respect a black-box. There is almost no systematic knowledge about the different and competing interests of groups and institutions involved in decision processes, and there is definitely no research about the interplay of interests, power, and capital, as well as the relations between them and the factual development of the traffic world.

One crucial element seems to be found in the different interests between groups which seemingly result into controversies and competition. Public actors (governments, administration authorities) have conflicting notions about whether older people should be treated as a special group - probably seeing them as a homogeneous group - or as a group comparable to children, handicapped etc. It is sometimes said that this unconsolidated perspective – which, by the way, is not clear in scientific research either – prevents the adoption of sensitive ideas and the implementation of useful measures. A further argument concerns difficulties in the sphere of public actors which stem from a severe lack of co-ordination and co-operation between the various actors in the field, having its roots in scattered competences, divergent interests, and lack of means for successful implementation. The result is energy and money dispersion.

Another characteristic which can be found on the side of the social environment is a general lack of willingness to do something for the elderly, that has already been referred to above. This observation is linked to an other one according to which older people in traffic are a weak group without power and lobby. Obviously, technical dimensions and prototypical drivers' interests are given emphasis over the needs of other groups. The elderly are one of these "other groups".

Given that unsatisfying situation in terms of research knowledge, it is useful to develop a scheme within which specific reference points of importance for the whole topic can be put – all the reference points concern (primarily) the experts' and decision makers' (e/d) situation. The basic dimensions of the scheme are: 1) Knowledge: the stock of what is known about the group of elderly people as road users; 2) Interests: intentions and goals (material, economic, political), which to reach is of advantage for a group or an organisation; 3) Power: the ability to enforce one's own interests even against resistance of others; 4) Responsibility: sphere of influence (formal, informal) and sphere of jurisdiction concerning traffic matters.

Dimensions	Reference Points
Knowledge	Reflection of actual research results Short-, middle-, long-term character Client- or group-specific Needs-oriented etc.
Interests	Dominance of specific interests (economic, political etc.) Regarding/disregarding needs of the elderly Manifest and latent interests Conflicts of interests Pressure groups, interest groups etc.
Power	Type of power (economic, political, informational) Power of definition (able to define what is good for whom) Formal/informal power Power-orientation and power-prestige Techniques of power-enforcement etc.
Responsibility	Local/regional or community/country/international Legal/formal/informal Influence on legislation, public opinion Influence on certain groups etc.

3. DEPRIVATION – A NECESSARY CONTRIBUTION

There are many remarks in literature concerning the problem that the elderly road users are relatively deprived when compared with other groups, that pedestrians are relatively deprived when compared with car drivers etc. Here, it is probably helpful to have some systematic considerations on the concept of deprivation:

"Deprivation" is a term in sociology often used according to the understanding that P.F. Lazarsfeld and other authors have developed in the late 1940s: deprivation, or more precisely, relative deprivation is a state of perception in which somebody is evaluating his or her own situation as compared to that of the members of a reference group. Thus, deprivation is always relative.

Additionally, it is necessary to use deprivation in terms of empirical indicators describing the actual situation of a group of people as compared to other groups or to earlier situations that group has lived in. That point gains its significance from results which make us aware that "the elderly" are changing their characteristics within time – the cohort of 60 to 75 years of age will hardly be comparable in twenty years to those who are 60 to 75 years today: health status, number of driving licence owners, level of education, etc., will change.

The observation that deprivation in such an understanding is concentrated on a substantial proportion of elderly people in traffic and transport has been a recurring theme of research on ageing in all industrial societies. Additionally, it has to be admitted that not only does deprivation affect a substantial proportion of older people, but when it does, it is likely to be an enduring experience. Deprivation is the result of an interplay taking place within social-structural conditions, cohort-effects, biographical developments, and interventional measures by the state. This last dimension is of special importance for the elderly in the phase after their active life.

If we concentrate on the detailed and varied material at hand it is easy to see that in old age there are some typical patterns which are constituted by societal factors:

- the changing of ideological perspectives on the elderly
- more differentiated patterns of deprivation according to the structures of social space

In most of the European countries and in the United States between the end of the 1960s and the mid 1970s, older people were portrayed as poor, weak, dependent, and, at least in some European countries, as those who should enjoy their well-deserved evening of life. In those times, many issues and problems which affected older people were recognised, in the frame of different policy programs. Since the end of the 1970s, however, the long-standing compassionate stereotypes have undergone a complete change which sometimes seem to result in the contrary: new stereotypes started to see the elderly as prosperous, hedonistic, selfish, sometimes politically powerful (in America more than in Europe) and, above all, the generation which is wasting the resources of their children and grandchildren. Contemporary public rhetoric is laced with proclamations that programs in favour of the elderly must be drastically curtailed and the discussion of national policies for the elderly is primarily driven by budgetary concerns.

Another important consideration relates to the factor of time. Subsequent cohorts are located in different social structures and material conditions and their members tend to a high degree to develop and preserve social and cultural features peculiar to the cohort. As a consequence, cohorts differ from each other by level of education, social and cultural norms, lifestyle, financial resources, etc. Cohorts represent at a certain point in their development the heritage of the historical times within which they have made their way through the years - and in a certain way their members do it too.

After all, it could be useful to pay attention to two types of deprivation when interpreting research findings concerning the differential situation of the elderly in traffic.

Deprivation of a stratification-related type

The conditions of social stratification lead to deprived situations among the elderly themselves putting some groups in very bad situations, as for instance, the very old living alone, the widows of low income workers, or inhabitants of very remote areas. That is of special importance when looking at the situation of Eastern European countries where bigger groups of elderly people are in a worse material situation than it is the case in Western European countries.

Deprivation of a policy-related type

Many disparities in general among older people are the result of legislation and policy programs. However, the same holds true for the area of traffic and transport. Numerous examples make us aware of the fact that administration and political as well as legal decisions and regulations put the elderly on the worse side of the fence.

4. SUMMARY OF ASSUMPTIONS

It has been said in the beginning of this report, that mobility is vital for maintaining personal independence and social integration. Lack of mobility can prevent older people from social and societal participation and it can lead to low morale, depression and loneliness. On the other hand, maintaining mobility can contribute to good quality of life in a remarkable way. Under the perspective of "ecological gerontology", three dimensions influence experience and behaviour of individuals: 1) to have control: to be able to lead one's own life independently; 2) psychological ability of resistance: the ability to cope with unexpected experiences and losses successfully; 3) competence in connection with everyday life: ability to fulfil activities of daily life even under restrictions and impairment. Important actors in society tend sometimes to blame the individuals: People get old and performance decreases. However, it is technically possible, and probably quite easy, to do a lot of things that make it possible for elderly citizens to remain mobile and active even under conditions of deteriorating performance and diminishing strength. To specify how this can, and probably should, be done it is necessary to take a look on what happens when one gets older as a member of our societies.

This is what will be done in SIZE: We want to find out, how mobility is affected by ageing, and what changes resulting thereof imply. Above, our basic assumptions have been outlined: The satisfaction of needs and their assumed dependence on mobility have been discussed. It has been underlined, that communication processes, interindividual and between groups – the elderly with "the rest of the world" – are affected and have to be controlled. This point is intimately connected to the understanding of problems elderly citizens have and cause. Understanding of problems, both by experts and by the elderly citizens themselves has to be enhanced. Among others, we have to understand better, what mobility, and especially what short-comings in mobility, mean for the elderly. Short-comings in mobility may have to do with decreasing performance, but they could also be related to fears and anxieties – whether objectively justified or not is not the question. Learning and development of compensation strategies in order to overcome deteriorating performance could of course be improved. So can the material-technical environment. If no measures are taken, the result for the elderly will be deprivation, in the widest sense.

By the methods that we are going to use during the following steps of SIZE – mainly interviews, surveys and workshop-techniques, we expect to get some answers that allow us to assess the accuracy and appropriateness of this set of assumptions.

Providing comparability

Research in SIZE is, as has been said, conducted in order to generate qualitative and quantitative information. In both cases the resulting information will be addressed to the:

- 1) Comparability of experts' and elderly citizens' responses, and
- 2) Comparability of European regions.

This is a challenging question since we need to keep a closer look to the process, before making assumptions about any kind of comparability. We are interested in the comprehension of the European senior citizen in his/her own reference framework. Efforts are to be made in order to obtain equivalent information from all partner countries. Therefore, a comprehensive approach is needed, where the qualitative orientation represents an essential and in fact unavoidable complement of the quantitative perspective (Cook & Campbell, 1979).

5. QUALITATIVE METHODS

Qualitative Methods in transport and mobility studies

Qualitative research methods are chosen here as a way to gather the more subjective data from attitudes and perceptions toward public transportation and mobility needs, those related to personal values and more emotional concerns.

Qualitative research examines the views of people on a certain topic in-depth, with the goal of understanding them. The aim is to explore a wider range of opinions, attitudes and motives, and to investigate some of the reasoning behind the views expressed by people. Such exploration is necessary in view of our assumptions, expressed above, that can to a large part only be approached in a frame of communication with the involved parties. Quantitative studies, later on, will give us an idea about the distribution of certain opinions, attitudes and motives in the population.

As said by Grosvenor (1997) at the International Conference on Transport Survey Quality and Innovation, roles played by quantitative and qualitative surveys, are complementary. It was shown that qualitative surveys are particularly useful in the early stages of a project when ideas are still being formulated, or when in-depth exploration of policy issues was required. In addition, qualitative questions could be used within otherwise quantitative surveys as a means of exploring topics in more depth, or just as a way of allowing respondents to explain things in their own words (which of course could direct the researcher's attention to things he/she had not thought of before).

Common methods of qualitative data collection

An overview made by Clifton and Handy (2001), of the types of qualitative studies being done in travel behaviour in recent years, points to the predominance of "focus groups" and "personal-interviews" methods. Two other methods are named, but "attitudinal surveys" are not generally classified as a qualitative approach, and "participant-observer methods" has not often been used in travel behaviour studies, in spite of the fact that it has been appreciated in urban space research (Chapin, 1974).

Thus, "focus groups" and "personal interviews" are instruments that deserve our interest in order to have a closer look at them.

Personal interview

What is an interview?

Generally speaking, the interview has been defined as a serious conversation that sets out a certain aim different from the simple one to be pleased with the conversation in a more restricted sense. Maccoby and Maccoby (1954) conceive the interview like a verbal, face to face, interchange between two or more people, one of which, the interviewer, tries to obtain data from the other people.

Benney and Hughes (1956) see the interview as a relatively new form of encounter in the history of human relations, where the older modes of encounter (parent-child, male-female) have better defined role definitions. They argue that the interview is a role playing situation where one person is much more expert than the other, and that while conventions regarding the interviewer's behaviour are beginning to develop into standards, the conventions regarding the interviewee's behaviour are much less clearly articulated and known.

This perspective suggests that the interview is something more than eliciting "the truth" about or from the informant. It is expected that the interviewer collects accurate information at the time he procures the attendants will be enough relaxed and willing to be able to completely answer a series of questions previously settled.

Oakley (1981) describes an interview as a conversation, in which many of the social communication rules are applied. However, it is also an instrument of data collection where the interviewer must deploy all the warmth and personality exchange in order to be successful.

Characteristics of interviews

In spite of the existing variety of definitions and types of interviews it seems, however, that there is a certain agreement in the consideration of a series of general interview characteristics (Sandin, 1981). These characteristics are:

- 1) Verbal communication. It is generally going on between two people in connection with all types of individual interviews. Non-verbal communication plays an important role in the interview-setting but is hardly ever taken up systematically in instruction guidelines and interviewer training.
- 2) A varying degree of structuring. This depends on the theoretical construct used when applying the interview, viz. on the type of answers one wants to have – not necessarily concerning the contents, but rather the elaboration of answers.
- 3) A specific purpose (which is intimately connected to the aspects 1 and 2 above).
- 4) A Bi-directional process. There is a mutual influence between the interviewer and the interviewed person. Some characteristics of the interviewer may influence the answers of the subjects. And, to a lesser extent, it can happen that characteristics of the interviewed persons influence the evaluation and judgements of the interviewer (Halo effect).
- 5) The adoption of specific roles by both parts (and maybe verbal and non-verbal behaviour according to these roles!).
- 6) An asymmetric position, which gets more accentuated as the dialog gets closer to the interviewed person.

Types of interviews

If we are to classify the different interview types we will be in serious problems since solid and uniform criteria of classification have not been established and universally accepted. It is rather usual that individual positions are adopted. In spite of that, there are some working criteria of classification:

- 1) Concerning the degree of structuring: the interviews can be structured, semi structured or unstructured.
- 2) Concerning the directional degree: directive or non-directive interview
- 3) Concerning the purpose: Clinic, orientation, evaluation or investigation interviews

The qualitative interviews have been described as non-directive, unstructured, non-standardised and open-ended dialogues. Rodrigo (1993), distinguishes the following types of qualitative interviews:

The informal or conversational interview: in which the objective is not as much data collecting as "to make acquaintance of the other", frequently used in participative observational methods.

The semi structured and schematic interview: starts with a prepared pattern of guiding questions, but can be presented in a diversity of manners to the interviewed person and without

following a specific sequence. A good relationship should be established with the interviewee.

Standardised open interview: It is made of a questionnaire that contains questions to be asked in the same formulation to all the interviewees. It serves to make comparisons of answers by different people.

In-depth interview: The interview method chosen by SIZE, in connection with focus-group interviews (see further below).

In this list, the focus-group interview is not mentioned, mainly because it is a group interview. This method will be discussed in the following:

Focus group interviews (FGI)

Focus Groups' history

Between the late 1930's and the early 1940's, focus groups were developed by social scientists (Krueger, 1988; Patton, 1990). In 1940, Lazarsfeld included discussion-groups with positive and negative emotional attitudes towards certain issues in his radio programs. Merton, Lazarsfeld's colleague, added depth to this process by asking the members of the audience why they responded positively or negatively at the particular moments of the program. This is how Merton conducted the first focus-group interview (Suter, 2000). Until the 1980's, focus groups were largely used in market research. Focus groups gained popularity because they allowed participants to explain the reasons behind their reaction to products (Krueger and Casey, 2000).

What is a focus group?

A focus-group interview is a moderated discussion designed to obtain perceptions on a defined area of interest in a non-threatening environment (Patton, 1990). It is conducted with approximately 7 to 10 people. The discussion is comfortable and often enjoyable for participants as they share their ideas and perceptions. Group members influence each other by responding to ideas and comments in the discussion (Krueger, 1994). There is, however, also a potential for making transparent conflicts of interests – when participants start contradicting each others.

The use of focus groups

Focus groups can be used at any point in a research program. Stewart and Shamdasani (1990) have summarised the more common uses of focus groups to include:

- 1) obtaining general background information about a topic of interest;
- 2) generating research hypotheses that can be submitted to further research and testing using more quantitative approaches;
- 3) stimulating new ideas and creative concepts;
- 4) diagnosing the potential for problems with a new program, service or product;
- 5) generating impressions of products, programs, services, institutions, or other objects of interest;
- 6) learning how respondents talk about the phenomenon of interest that may facilitate quantitative research tools;
- 7) interpreting previously obtained qualitative results.

Focus groups have largely been used in transport studies addressed to the senior citizen population (Kostyniuk & Shope, 1998; Orange Community Transportation Authority, 2000; Coughlin, 2001; Burkhardt, McGavock, Nelson & Mitchell, 2002, and others).

This method, that became a popular tool of marketing firms in gauging consumer reactions to various products and services, has been incorporated in the transportation field to identify mobility needs, evaluate programs, identify preferences and attitudes, assess reactions to different service or policy scenarios, etc. . Focus groups have been used to assist planning of transport services. Feedback from participants is used to design programs that are better suited to the needs of users.

Features of the focus group interview

Butler, Dephelps and Howell (1995), present some of the main features concerning the personnel who attends:

- an interviewer/ facilitator, who knows the topic being addressed and is skilled in asking questions without biasing the answers. There are many quality menaces for focus-group interviews that a skilled interviewer has to tackle (see Krueger, 1993).
- an assistant interviewer, who has the same knowledge and skills as the interviewer, but serves as a recorder and helper.
- a group of participants, about 8 to 10 in number, should be selected to represent some larger population or group of relevance to the problem or situation being investigated.

Some restrictive conditions can be:

- 1) The structure; weakly or strongly structured.
- 2) Length of each session, usually not longer than two hours in length.
- 3) The number of participants. For example: the group size will change depending on whether we are working in a market research or in an academic research (NAEYC, 2001).

Critical issues on focus group interviews

Criticism on focus groups came from different sources:

- 1) To its limitation: Focus groups are not useful for traditional hypothesis testing or drawing inferences from large population. Focus groups are useful only if the focus is narrow (Bers, 1989).
- 2) To its validity: the respondents may not do what they say they will, may produce halo effects and strategic response effects (Clifton & Handy, 2001).
- 3) To the group dynamics: Lara and Rojas (2002) point to deficiencies like group fragmentation (when there are many participants); the role of the moderator (outstanding and possibly too directive, etc.).

Procedure

The detailed procedure will be presented in the respective deliverables that are produced after the focus-group interviews (SIZE Deliverables 5 and 6). Here, we just want to list the main questions that will be dealt with in the focus-group interviews. These same questions have also been used as guidelines for the structuring of the SIZE State-of-the-art report (Deliverable 3).

Main questions

1. *How do senior citizens cope with the present mobility situation?*

2. *What enhances the mobility of senior citizens?*
3. *What limits the mobility of senior citizens*
4. *Which measures are necessary to improve the situation?*
5. *What prevent measures that are considered useful from being implemented?.*

The interviewer-facilitator (specialised staff) will ask the questions and will interfere only if it seems necessary, to take care that all participants are able to share their views, to keep the interview going and to guide it in the right direction. (See Krueger, 1993 for a detailed control on focus group quality).

One or two assistants will take notes of the session, getting as much detail as possible (see Dawson, Manderson & Tallo, 1993 for staff training).

Sample selection

Senior Citizens: Every country involved gathers 30 to 40 selected senior citizen (e.g., with the help of senior citizens organisations), which will give 3 to 4 FGIs by 8 to 10 participants. Main characteristics of the sample: age 65+, representative of both kinds of sex, with or without physical handicaps or restrictions, representative of all types of modes of transport (pedestrians, car drivers, public transport users, cyclists, selected according with to what they tell that they do most often), and representatives of different settlement forms (rural areas, outskirts of a town areas and city areas).

Experts: 30 to 40 persons, recruited from professionals and staff from institutions dealing with traffic and design of thoroughfares, representatives of institutions dealing with traffic and access planning (town council, traffic police...), experts on traffic, senior citizens and physical handicaps or restrictions, from different political parties, trade unions and other associations; 3 to 4 FGIs by 8 to 10 participants.

In-depth interviews

The in-depth interview, also known as ethnographic interview (Spradley, 1979), or unstructured interview, is a type of interview which researchers use to elicit rich detailed material. Such interviews are best conducted face to face, although in some situations telephone interviewing can be successful (Mahoney 1997). This type of interview involves asking informants open-ended questions with the goal to obtain data considered useful by the researcher. As in-depth interviews usually deliver qualitative data, they are also called qualitative interviews. Berry (1999) points to three basic approaches for conducting qualitative interviews:

- 1) The informal conversational interview
- 2) The general-interview-guide approach (commonly called guided interview)
- 3) The standardised open-ended interview

This interview can provide the same rich, situational response as focus groups (see below). Because informants are interviewed individually, the confidentiality issues and normative pressures that often are disturbing in focus groups are not as problematic. The interview format provides a more intimate setting for discussion of sensitive issues or very personal matters, and more detailed information about the individual or household circumstance can be received. Interviews allow for flexibility in the type of information being collected. Because the respondent is answering questions in the presence of an interviewer, there is an opportunity for clarification, explanation, and elaboration of questions and responses.

The use of in-depth interviews

Clifton and Handy in their overview on *Qualitative Methods in Travel Behaviour Research* (2001) refer to a variety of studies where personal interviews were used extensively. They resulted as being useful in the exploratory and diagnosis phase of research helping to: First, define what behaviour should be taken into account and pointed to the need for activity diaries rather than travel diaries; Second, the interviews revealed that activity records are just the outcome of a covert decision process involving some sort of decision taking; Third, the interviews revealed the group structure of households; Fourth, interviews made visible the subtle constraints and interactions that steer travel behaviour as a part of daily activity patterns.

Semi structured interviews were used to identify the mobility constraints of low-income households, factors that contributed to automobile purchase, and the strategies to gain mobility for their non-work activities (Clifton, 2001). Semi structured interviews were used to uncover factors that were influential in the employees decision to participate in an employer program. The interviews revealed several social and personal factors that influenced the transportation choices that employees made. These factors were not detected by a traditional questionnaire (Pulenez-Donovan and Ulberg, 1990).

This short overview takes us to the suggestion that the personal interview is a good tool when used to uncover those factors, especially mobility and transport issues, that are hardly to be detected by traditional tools.

Procedure

The elaborated procedural plan will be presented in the frame of the respective SIZE Deliverables 5 and 6.

Sample selection

Senior Citizens: The sample of people for these interviews will be a different one from FGIs but both samples will have the same characteristics and size. This way we will avoid "learning effects". About 30 individual interviews will be carried out with a new sample of elderly people. The question-list for the in-depth interviews will consist in completing the FGI-question-list with state-of-art results and experiences from the FGIs. Participants will be given at least 10 minutes for elaborate on every topic. An interviewer will conduct the interview and will take notes at the same time.

Experts: An interviewer will conduct the interview and will take notes at the same time. In-depth interviews with the experts should be conducted very shortly after the FGI. The same questions will be asked again but for the in-depth interviews the introduction will be completed by saying: " in the FGI where you took part we discussed these questions" (tell questions) "Now could you elaborate on this? Let's start with the first question" (tell question 1).

Qualitative Data Analysis

Senior citizens data

After the FGIs and the in-depth interviews have been finalised the outputs have to be organised in order to compare them with the experts (workpackage 4). That would give us an idea of the quality and amount of information that experts have about senior citizen's mobility problems.

Experts data

After the FGIs and the in-depth interviews have been finalised the outputs have to be organised in order to compare them with the senior citizens (workpackage 3). That would give us an idea of the quality and amount of information that experts have about senior citizen's mobility problems (and vice versa).

Feed-back to participants

A common complaint from people who are interviewed or take part in other forms of scientific co-operation is that they never get to know the results of the research. This can give them the feeling that what they have to contribute is of little value and they may be reluctant to participate in future consultation exercises. It is therefore important to make provisions for reporting and feed-back, not just to those who need to act upon the results but also to those who answered interview questions or co-operated in other ways. This feedback can take various forms but the key point to remember is to keep it simple. One probably should produce short but comprehensive summaries of the findings plus some key action points or recommendations arising from the consultation. Respondents should know that what they told us makes a difference.

6. QUANTITATIVE TOOLS

The following outline is very general, shortly summarising aspects that have to be considered when applying quantitative tools. However, the instruments will grow and be developed stepwise on basis of what we learn by applying the qualitative methods discussed above. They will be specified more in detail in the respective SIZE Deliverables 8 and 9.

Mobility: A measurable variable?

The project SIZE as an empirical research project has qualitative and quantitative parts. Analysing the situation and living condition of the elderly requires collecting data, also in the sense of numbers. Numbers are the parameters of observable aspects of reality, indicators of important dimensions of the research object. But parameters are variables that have to be interpreted. Interpretation requires insight into the construction principles of the parameters.

Some of the results of the studies on traffic participation and choices of mobility are contradictory. This fact could (partly) be understood as a consequence of different criteria and indices of measuring mobility or aspects of mobility. To find those criteria and measures, which are convenient for SIZE, we have to clarify the task of assessing mobility step by step.

Mobility as a spatio-temporal process refers to the actions of individuals, to "what they really do". But what is a quantifiable (countable) action in the context of mobility? A countable action must have a definite beginning and a definite end. Beginning and end can be defined in space and/or in time.

When does a single act begin, when does it end in the case a person realises outdoor mobility? The relevant research projects of the past decided to count single ways or trips as units of mobility. There is no doubt that a trip begins when a person leaves home. But if we look at mobility as goal directed action we have to state that the trip a person makes may have several goals (going to the doctor, visiting a friend, buying food and returning to home). So one trip disaggregates into several single acts. What shall be the interesting unit: the single acts or the whole chain of acts? The task is complicated by the fact that the actualisation of a trip as well as a single act perhaps makes it necessary to use more than one transportation mean (e.g., going to the doctor needs a connection of tramway and bus, other parts can be done by foot, etc.). A trip may be divided in several single sections in this sense (in some studies, the authors chose instead of trips to talk of journeys, consisting of single trips – see Hydèn et al., 1997).

Parameters of mobility can be related to the acting persons or to the ways or trips they realise, to temporal duration or to spatial distances. Person-related parameters could be:

- Frequency of leaving home per day
- Frequencies of journeys or trips or (outdoor) mobility acts per day
- Sum of time spent outside the house per day
- Sum of distances (in kms) per day
- Proportion of being outdoor in relation to being at home etc.
- Walking speed

Also the physical mobility (mobility as a personal physical characteristic) can be measured, for example by a computerised monitoring system (see Chan et al., 1999). This system reports on the participant for instance:

- How many times did he get in his flat;

- How many times did he go out of his flat;
- How long did he stay in his flat each time;
- How long did he stay in bed;
- How many times did he get up in the night or in the day (c.f. Chan et al., 1999, p.95)

It will be interesting to see how such data can be referred to by applying verbal-data base instruments (= survey tools).

Subjective aspects of mobility are measured by special scales like the satisfaction scale in the German part of the KEM project (Outdoor Mobility Survey, Tacken, Mollenkopf et al., 1999) that records the satisfaction of elderly people with their possibilities to get where they want to.

If we choose journeys or trips as units of investigation we could accept the following parameters for instance:

- Length of certain trips (in kms) in average
- Duration of certain trips in average
- Speed of certain trips (length/duration)

Special parameters could be formulated with respect to motorised mobility:

- Percentage of driver licences in certain target groups
- Percentage of availability of a car in certain target groups
- Rate of use of different modes in addition to the car
- Parameters of traffic participation with respect to duration (time spend in traffic) and performance (e.g. covered distances in kms per year)

The choice of transportation means can be illuminated by parameters of usage (see Engeln & Schlag, 2001, p.177/ff):

- Denomination of the main transportation system
- Fraction of different transportation means in respect with the transportation performance as a whole
- Choice of mode in relation to time of day

Solutions that the elderly as well as the experts will mention can be weighted. On examples of an instrument that is used for weighting is the SOC-model (SOC = selection, optimising, compensation). With help of this instrument one can assess, e.g., the relative weight or importance of different coping strategies.

The options for inventing and combining such parameters are nearly endless. The above mentioned classes and categories of mobility could be the basis of quantitative research, too. Only two examples: We can report, how often a certain leisure time activity is realised per week or how great the efforts must be (in terms of time and/or distance) to visit relatives.

All investigations could be differentiated by age, gender, and social position etc. of the subjects. And all parameters could be correlated to others. The field of quantitative mobility variables and their relation to others is hardly to review.

7. PLANS FOR THE NEXT STEPS

For the qualitative work steps, the focus-group interviews and the in-depth interviews that follow them, detailed conceptual frames and work plans have been elaborated, based on the draft versions of the state of the art and of this report. They will be described and explained in the respective SIZE deliverables 5 and 6.

One preparation activity for the qualitative work steps was to discuss concepts that are mentioned or elaborated on the connection with the topics of SIZE: Preconditions for the mobility of elderly citizens and impacts on life quality. Examples for such concepts are Accessibility, Comfort, etc. We do not expect that such concepts are named by the elderly citizens themselves, with the termini tecnici that denominate the concepts. But they will most probably frequently refer to the concepts. And in all discussions and dialogues with them we will then have to ensure sufficient overlap of understanding of the concepts. The same will be valid for the experts. The main difference will be that they sometimes use the termini tecnici. Thus it will probably be easier in the communication with the experts to realise where common understanding has to be made sure. Anyway, whenever the mentioned concepts are named or referred to in our communication with the target groups, the consortium members in SIZE need a common base of understanding. We have tried to establish such a basis in the frame of the mentioned discussion of concepts. The outcome of these discussions is included in this report as a "Glossary of terms and expressions". At this stage of the project the glossary is not yet complete, but rather kind of an embryo. It will be finalised in the course of the project. There are also plans to translate it to the languages that are represented in the project SIZE.

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ANNEX: GLOSSARY OF TERMS AND EXPRESSIONS

Accessibility

Accessibility: the ability to reach and to use the places, of the services, facilities and equipment, including modal interchange points. It is considered a pre-requirement, a basic element of urban public open spaces.

The key idea of accessibility is: People should be able to get to key services (access to mobility and transport modes, access to work, access to healthcare, access to food shops, access to social, cultural, and sporting activities) at reasonable cost, in reasonable time and with reasonable ease. These problems have an impact on the individuals concerned, for example by cutting them off from jobs, friends, services and training. This in turn prevents them from breaking out of the cycle of social exclusion. This problem is especially valid for elderly citizens, which as a long-term consequence cause costs for the communities. They also reduce initiatives by the affected persons and groups themselves and thereby undermine objectives that are essential to combat poverty and social exclusion like adequate income, educational participation and attainment, efficient health, and reducing crime and antisocial behaviour. Accessibility depends on several things: Do traffic facilities exist between the people and the service? Do people know about them, trust their reliability and feel safe using them? Are people physically and financially able to access them? Are the services and places of activities within a reasonable distance? Solving accessibility problems may be about traffic and transport facilities, but also about locating and delivering key activities in ways that help people reach them. Five key barriers to accessing services are:

1. Lack of availability and physical accessibility of transport: For some people there is no public transport, or it does not go to the right places or at the right times, or it does not go often enough or reliably enough, or vehicles are not accessible nor usable for disabled people. People living in rural areas who have no access to a car can face particularly acute problems.
2. Costs of transport: Some people consider the costs of personal or public transport very high or unaffordable. Bus fares have risen. Transport costs account for 24 percent of the weekly expenditure of the 20% of the households with the lowest income.
3. Services and activities located in inaccessible places: Developments including housing, hospitals, business and retail are often located in areas not easily accessible to people without a car. For instance, the number of out-of-town shopping centres increased sharply during the last years.
4. Safety and security: Some elderly people are unwilling to use public transport or to walk to key services because of fear of crime or antisocial behaviour, or fear of road accidents. For example, majority of woman and part of the men feel unsafe when having to wait on a train platform after dark.
5. Travel horizons: Elderly people are unwilling to travel long journey times or distances, or may not know about or trust transport services. The average distance to work for people with low income is three miles compared with eight for the general population.

Historically, nobody has been responsible for ensuring that people can get to key services and employment sites. As a result, services have been developed with insufficient attention to accessibility. Too often, accessibility has been seen as a problem for transport planners to solve, rather than one that concerns and can be influenced by other public institutions or organisations, for example by locating, designing and delivering services so that they are easily and conveniently available.

Ageing

There is growing research interest in the study of the processes of "ageing", old age, and the elderly. Gerontology is frequently viewed as a branch of biology, with a focus on the role of genetic factors (the extent to which ageing is pre-programmed), the study of the social aspects of ageing, sometimes termed social-gerontology, is now well established. Interest in ageing has grown enormously with twentieth-century demographic changes. Increases in life expectancy and reductions in child bearing have transformed the age-structures of the population of advanced industrial societies, increasing significantly the proportions of the elderly (usually defined as persons aged 65 or over). Since the use of many forms of welfare provision (especially health care, personal social services, and state benefits) rises markedly amongst those over 65, increases in the numbers of the elderly (especially in the growing numbers of those aged 75 or over) are a major cost factor and a major concern for policy-makers and policy analysts.

However, although policy issues are of great importance, the sociological contribution to gerontology comes from the study and analysis of age as a social category, and of the way in which the structures of society shape the ageing process, including the way it is experienced by individuals. The status of the elderly varies significantly across time, place, and social arrangements, including the extent to which retirement policies, pension provisions, housing and access to mobility can foster independence or generate dependence, with important implications for physical and psychological health. There is growing awareness of the salience both of stratification by age and of ageism in society.

Comfort

The physical and psychological well being in relation with the climatic factors and meso-climatic conditions, due to the elements that constitute the urban environment and to all the factors that affect the senses (shapes of buildings, green areas, water, type of mobility, of spaces and of their use, related consequences and so on); and finally as commodity, of movement and rest, for the various possible uses of the urban space.

Deurbanisation - Suburban de-development

This phrase has been induced by changing production technology when the production on assembly belts has been replaced by a co-operating network of smaller operations, active in great distances from city centres. Statistics show that small and medium-sized companies account for an essential part of the economic growth; the average size of companies decreases. Export articles are increasingly de-materialised; they consist of information, services or innovations. The growing role of the tertiary sector (services) contributes to the migration of population to smaller settlements. Companies providing services also migrate to places with cheaper land and labour. This trend has instigated an immense development of transmission of information over long distance (e-mail, faxes, mobile telephones, computers connected in networks, the Internet, telecommunication satellites, etc.). Thanks to the telecommunication technology, both companies and financial operations can be controlled from more distant locations. All this allows people to both work and live away from the city-centres that are becoming less accessible for their inhabitants due to traffic congestion caused by business activities that still take place in the centres. These processes change the character of the city margins and the suburbs. They are accompanied by non-regulated growth, crises of transport systems and increased individual use of cars due to the construction of commercial shopping centres and residential zones, and sometimes due to non-co-ordinated residential building. Those who lived in these suburbs and who have no access to a car end up in problems.

To deal with the issues of traffic and parking, costly transport and parking facilities are built. At the same time, conditions for making traffic more intense are established by these and other measures. In consequence we can witness an increase of traffic in spite of e-mail etc. (or is it legitimate to say: because of it), happening in parallel to a devastation of the environment even beyond the borders of the affected regions. Historical centres of cities are often damaged and the environment deteriorates. It is paradoxical that the construction of speedways connecting suburban developing locations with the central part of the city can contribute to the destruction of the central parts of the city by enhancing the dispersion of functions crucial for the centre. It means that if the concentration of retail, light production, recreational, cultural and educational functions, vital for this part of the city, decreases, the centre will be destroyed. The road system supports spatial distribution of population, but also enables the shifting of vital activities to new, more distant centres.

Another problem has been created by ill-considered and non-regulated growth of administrative buildings in European city centres. Where new buildings could not be built, old buildings were used. Bad luck for people who lived there, senior citizens in particular. Adjacent historical squares then automatically became parking places. We recognise such derelict places according to their negative "attitude" towards pedestrians. Buildings are so close to the roads that there is no space left for pavements and great distances do not enable access other than by cars to these places. We all know this situation from our shopping centres at the outskirts of cities. Very little is gained by this approach, and the tendency of inhabitants to leave cities is increasing as the cities become uninhabitable; all negative civilisation aspects are often concentrated there. This induces an increased desire of people to spend as little free time in the cities as possible; and they have more and more free time. Urban development thus drives people out of the city, first of all to places in their vicinity. Due to the extending suburban areas, however, they are forced to drive longer distances in their objective or subjective effort to get into contact with intact nature and spend time in undistorted country. The increased use of cars dramatically damages the environment; this phenomenon has also approached places that so far have been affected less. The term "urban sprawl" is used to describe this tendency. Shopping and cultural centres are also built outside the city in the proximity of motorways to enable the mass of customers to park. And this again aggravates the transport conditions (congestion, combustion gases and dustiness, etc.) near large cities.

In European cities senior citizens comprise relatively big portions of the inner city inhabitants. Due to urban development and non-appropriate urban planning policy they lose the access to the facilities they need (shopping, sport, leisure and medical care). Cities are endangered by the leakage of investments from central parts, by growing social separation arising from different income levels and social statuses, by deteriorating living environment, loss of agricultural land and original countryside environment in the vicinity, and erosion of architectural monuments. The image of city centres is aggravating; the press refers to the "crisis of cities", "decline", "pathology", "alienation" and decreasing investments in these areas. Changed accessibility and deteriorated quality of the environment (noise, air pollution, vibrations, etc.) may induce migration.

People of higher status move out of these locations because they feel that they are becoming less inhabitable. The population migrates to less urbanised places which, however, must be easily accessible. Then it is followed by services that contribute to a fast development of new settlements, often at the expense of the quality of the environment².

² This is based on the assumption that the "form follows finance" and that the current uncontrolled extension of cities is a direct result of ongoing financing practices. New urban development addresses people trading in land, financing and building to pay attention to new, multi-purpose uses and communities focused on pedestrian and bicycle traffic. New urban development is in favour of combined

Every year several thousands of inhabitants leave our large cities. As we mainly experience migration of families with medium and higher income, we lose their contribution in the form of taxes, which could be used for restoring neglected and declining parts of the city. The same applies to companies and institutions moving out of the city; in a certain sense they are lost for restoring existing industrial areas, the so-called "brownfields". The city centre population is quickly declining; the same applies to the number of job opportunities. As a result, we experience the transformation of formerly overpopulated inner parts and transition zones. Some parts of the city lose their function or become inhabited by groups of lower status. These groups occupy the emptied areas. Consequently, social problems emerge. In the last twenty years, the power of globalisation gave rise to a strong social polarisation, which is mainly distinct in urban residential areas: they are considerably socially fragmented and segregated. Sooner or later there will be no other option but to rehabilitate the living areas that are becoming redundant. At some places this process has gone so far that municipalities felt compelled to start restoring such "functionless" areas.

Disabled People

People with reduced mobility (according to the European Parliament definition: PRM), considered in all dimensional, sensorial and psychological aspects and in all the situations: temporary or permanent. The elderly and their exigencies are included because of the increasing overlap with increasing age.

Elderly citizens

This concept is subject of several SIZE-deliverables and therefore not discussed here.

Environment

The physical and social space in which people (the citizens) perform their activities. It can be of many different types, so it is defined by various adjectives: built or inbuilt, indoor or outdoor, forgiving or not, etc.

Interview

This concept is subject of several SIZE-deliverables and therefore not discussed here.

Measure

All technical or non-technical devices and activities that are studied, evaluated, selected and implemented in order to achieve solutions of identified problems.

Mobility

The possibility of performing the process of locomotion in the space, using any possible mode: motorised and non-motorised. It is considered in relation both to the urban and environment conditions, and to the individual's own decision making.

Process

The system of all the actions, organised in temporal succession, necessary to obtain the most satisfying product in any field.

and untraditional use of areas, new commercial and residential projects, urban development research and the so-called "*smart growth developments*" and controlling the development using the multi-disciplinary approach. It co-operates with governmental organisations, non-profit housing organisations, urban developers and community activists to provide for the vitality of the neighbourhood, placement of specific facilities and a satisfactory urban development design.

Quality of life

This concept is subject of several SIZE-deliverables and therefore not discussed here.

Reurbanisation - Urban re-development

Urban re-development is closely linked to the world economy: some metropolises have got into a special, positive situation and have become nodes of increased flow of information and capital (which gave rise to the term "nodal urban development"). The new expansion of some city centres may be caused by decline of traditional industries and the increased role of information processing and services. Another factor is the response of large cities to sub-urban de-development: restoring central parts, adopting legislative measures slowing down the suburban de-development, decreasing volume of transport and even better distribution of job opportunities in the city structure. An effort to make the cities attractive again is quite distinct; it is done by the application of permanently sustainable development procedures, prevention and restriction of social exclusiveness, co-operation among managers, new approaches, co-operation and mediation. Urban development has become a tool for making the cities more attractive for business, investments and tourism and for increasing their value in the highly competitive global market. This is demonstrated by renewing the formal image of the cities, for example by restoring street systems, urban avenues, embankments and squares for municipal celebrations, building new and restoring old parks, or building shopping streets and parking areas. This brings some groups of the population back to the cities. To make this trend sustainable, central urban parts are renovated to become attractive for industry, business and tourism. In newly restored inner parts of the cities, more solvent groups move to renovated houses. It is not always necessary to tear down older buildings; it is often possible to find a new use, even for old warehouses, breweries, assembly halls, etc.. These buildings, abandoned in the past by the middle class and by businesses, are offered by prudent and enterprising administration of some cities to live in and to attract companies and international capital to re-invest in these locations. The efforts aim at restoring existing city centres with coherent urban regions, at reconfiguring rapidly growing large city suburbs to communities with positive neighbouring relationships, and at maintaining natural environment and architectural legacy of past generations. This process is described in different ways: revitalisation, and renewal, where the transformation of the negative, "dead", "poor" and/or "non-productive" environment into something positive, is emphasised. The quality of the environment and the commercial price of land is increased in a costly manner, and this results in the situation when the city centres adopt the features of sub-urban administrative parks.

At the end of the 20th century and in the 21st century, Europe experiences the renaissance of cities³. City centres, formerly often considered as bad and therefore ignored and abandoned after repeated waves of suburban development, have again become the centre of life. The renewed cities have in some places prepared better conditions for the elderly. They have restricted individual transport, supported and developed public transport, ecology, and have given preference to people over cars. We can see increased investments and economic movement, which instigates the growth of job opportunities in city centres. We are witnesses to the expansion of cultural facilities, innovation of retail, growth of urban tourism and, consequently, to a new image of some cities or their parts. New "urban" or "street" activities

³ Urban planners, developers, local governments as well as citizens take great interest in the new urban development and its approaches. This particularly applies to the regions in which damage was done by an uncoordinated city growth. Many consider the new urban development as the approach which will bring benefit to all involved; the city growth is channeled into such a physical form that suits the current city structure, does not increase requirements for the use of cars, is less demanding in terms of finances for services, and saves land and natural resources.

have been re-invented, social, conference and entertainment complexes have been built. The demand for habitation has risen, which may result in increased numbers and better mix of population. An important objective is to maintain a certain share of habitation in city centres so that they do not become "one huge office", which is dead and dangerous at night. Permanent inhabitants provide for the feeling of occupancy, warmth and life, which is mainly felt at night when the streets are enlightened by the light from windows.

It is important that public opinions have also altered. The attitude to senior citizens in cities is changing. The image of city centres is improving; they are mentioned in a number of articles in the press. Despite the burden of the heritage of the past, economic, social and cultural forces have come up, united in the name of traditional city values and urban life. The scattered house building in the areas caused by the suburban development is criticised and disadvantages of suburban lifestyle are discussed including loneliness, boredom and stereotype in suburban areas and their negative impact on children and adolescents. There is often saturated demand for habitation in suburban areas and their commercial facilities. On the other hand, new job opportunities in urban locations increase the purchasing power of urban population. Demographic characteristics are changing and new types of family structures and ways of living are arising. A more qualified and wealthier population needs diversity and stimulation, it searches for "the spirit of the community" and the "identity of the place". Environmental awareness is increasing as well as protective approaches to the city values. The cities thereby re-attract people who wish to live and to work in them, or visit them for tourist or cultural reasons.

Generalised findings of individual cases of successful urban re-development show that the ideal would be to have a compact city with the mobility conditions that protect the living environment. Such preconditions would not only stop the drain of people; they would even increase the population. This would have positive consequences for social diversity, protection of land resources, concentration and optimisation of urban services, possibility of building intra-city optimised transport routes, constructing cycling routes and pedestrian zones, etc.⁴. The use of good-quality city public transport would increase. It has been proven that the intra-city passenger transport by people's own cars can be reduced by introducing effective public transport by up to 20-30%. Compact urban structure and mobility protecting the environment will also result in a higher economic efficiency by making the city centres more attractive; costs of infrastructure, such as transport routes, will decrease.

Safety

In the SIZE papers it is meant as the safety of use of transport modes and thence not only the safeguard from dangers related to traffic (i.e., traffic safety), but also from those inherent to the use of the related pedestrian space itself. It must be considered in its physical and psychological aspects.

Standardised interview

This concept is subject of several SIZE-deliverables and therefore not discussed here.

⁴ Every year, Europeans spend over 500 billion Euro for transport. Losses caused by delays and incidents are estimated at 150 billion Euro a year. New solutions are therefore sought that would enable the reduction of high incident rate, traffic congestion and air pollution. The only solution for the future will probably be a more consistent, more flexible and more effective traffic management using intelligent traffic systems.

Security

The safeguard from unexpected events that are not related to traffic and transport in its physical and psychological aspects.

Senior citizens

This concept – synonym to elderly citizens - is subject of several SIZE-deliverables and therefore not discussed here.

Settlement structure

Essential changes in the settlement structure of European countries affect the life quality and mobility of their inhabitants. This particularly applies to senior citizens, who are generally less healthy, not too rich and less mobile. Since the 1960s, a new phenomenon has started to occur in the statistics of cities and urban areas of Europe: the largest cities have stopped growing and marks of de-concentration have arisen. At this time, geographers of settlements have come up with the "general theory of modern urban development". This theory is based on the assumption that the development of cities consists of successive phases of urban development (for example Berg, Drewett, Klaassen, Rossi, Vijveberg, 1982⁵; or Cheshire & Hay, 1989⁶). According to this theory, which serves as a general model, certain cycles are always repeated in all cases of urban development; first they appear in innovative centres and then they are extended to other places in the world. This is in compliance with the general theory specifying that urban process be determined by economic development and industrialisation, which has a crucial impact on optimum location of the population. The optimum is more or less independent of the political system or social and economic establishment, which only constitutes side and modifying factors. The basic urbanisation model is partly modified by historical and national features of different regions.

Solution

At one end of the process of improvement the theoretical way in which a problem can be solved, and at the other side the assessment that an identified problem has been solved.

Successful ageing

Current conceptions of successful ageing place the emphasis on maintaining and developing appropriate and sensible activity at an advanced age. The approach of non-committedness – of a restful far-niente – has been abandoned. This has been confirmed by ever more sophisticated research, while practice is providing positive experiences with activation programmes. Passive pseudo-adaptation with stimulatory and emotional deprivation, with a poverty of social relationships, is nothing less than pathogenic in old age and leads to an acceleration of atrophy and an existential vacuum (c.f. the Czech psychologist Langmeier⁷).

The adjective "successful" may imply connotations of success of performance. The construct must, however, be understood within a more general contextual scope. It involves experiencing life's satisfactions and minor dissatisfactions alike, experiencing life's values, its

⁵ Berg L. van den, Drewett R., Klaassen L.H., Rossi A., Vijverberg C.H.T., 1982. Urban Europe: a study of growth and decline. Oxford (Pergamon).

⁶ Cheshire P. C. & Hay D. G., 1989. Urban Problems in the Western Europe: An Economic Analysis. Unwin Hytman Ltd, London.

⁷ Langmeier J., 1959. Clovek znamy neznamy, Mlada fronta, Praha.

meaning, and taking advantage of all the available potentialities⁸. Good intentions may, as is so often the case, come to nothing or even accentuate the stagnation of activation programmes in the routine of the superficial activities which pensioners are subjected to in old people's homes, with no inner enthusiasm and with no concern for their own interests.

The concept of activation implies any kind of activity coming from the internal motivation of the client and strengthening and activating the behaviour and experiences of personality as a whole, i.e. on the biological, psychological and spiritual level. This should include spontaneous, non-organised and refreshing activities, and creative participation in every-day activities.

Suburban development

The suburban development is the accompanying phenomenon of a new phase of the socio-economic revolution, when the focus of economic activities is shifted from the industrial production to services that are demanding in terms of knowledge, skills and supply of information. This "economy of services", based on the vision of technological and managerial revolution according to the theories of Daniel Bell, John Kenneth Galbraith, Zbigniew Brzezinski, Kenneth Boulding and Amitai Etzioni constitutes the economy of information based on education, schools, science and specialised management as a critical resource of development. Research and development people as the "workers of science" and the people working with information constitute a crucial element in the post-industrial society which again puts emphasis on planning; an interconnected network of corporations and governmental bureaucrats is formed, controlled by managers and technical specialists who, rather than owners and politicians, represent the elite of power and prestige.

Changes in the settlement structure are thus induced by the changes in economy and society. This process is influenced by the attenuation of heavy industry and departure of workers to the tertiary area and light industries producing on assembly lines requiring single-floor industrial halls with large areas. The easiest thing is to construct such halls in the green belt; due to the sophisticated equipment used, they require extensive capital. They are mechanised and automated and do not therefore require many employees; as a result they can be built in greater distances from city centres. This is the reason why such high-tech operations are built in suburban areas where their construction does not cost so much; due to the character of their production, they employ more qualified labour force. Traditional production, which employs less qualified and less paid labour force, remains in city centres.

Administrative and research parks with pilot operations thereby follow industrial parks in suburban areas which enable to take advantage of new, fast roads, cheaper construction plots and ample parking space, and to avoid the drawbacks of the city, such as bad quality of environment, crime, growing poverty in central areas and other negative phenomena. Administrative parks represent cheap locations for companies that are not established yet and need cheap start-up conditions. Due to the overpressure of investments, new, mainly storage and commercial constructions proliferate "in the green belt" in the proximity of urban conglomerations. Shopping centres have grown almost spontaneously along outward-bound roads and motorways are rimmed by tens of kilometres of metal-sheet assembly halls, warehouses and shops. Cities are thereby chaotically extended at the expense of agriculturally utilised countryside, which again increases pressure on non-ecological intensification of agricultural production.

⁸ In old age man is more intensively concerned with, even tormented by, his own past. He may become hostage to it, or shape or remodel it with a change of attitude and positive actions. The subject of one's own past, Sterns' et al. (2001) "personal time", cannot however be reversed in practice. The legacy of the past is one of the given facts on our journey through life.

We can witness the decelerating pace of traditionally fast urban development, typical for first post-war period. Extensive urban development is slowing down and increasing numbers of population are leaving large cities; on the other hand, living environment and infrastructure in the suburbs are improving (shops and facilities have followed people) as a result of a growing number of job opportunities and increased income of people living there (mostly middle-aged qualified "white-collars"). Tertiary aspects affecting the society in most advanced countries have led to changed requirements for housing. People who have the possibility to use means of individual transport change their places of living. An increased use of cars enables greater groups of population to move quickly between their homes and workplaces. Leaving the city is becoming more characteristic of the richer population, for whom satellite or villa towns, adjacent to suburban areas or neighbouring villages, are built in the proximity of larger cities. The term of "social exclusiveness" of new locations is starting to be used, which causes the increased concentration of socially similar groups. New-comers usually do not come in contact with the original village population because of their considerable social distance.

The uncontrolled growth of cities further reinforces all unhealthy social trends regarding both power consumption and agricultural areas. Weekend trips of city population to the country will start reminding us of moving of nations polluting the environment with exhaust. Under these circumstances we need to view the countryside utilisation and the structure of population distribution more pragmatically as this view will highlight transport requirements, especially for groups where a high portion has no possibility to use the car, which is especially valid for elderly citizens. The cities suffer from the fact that in many places cars have pushed out life represented by pedestrians. Cars took over roads, pavements, squares and embankments. The reason behind it was the desire to be able to reach any point by car, which often relates to the feeling of freedom. The following applies here: the denser the population within the city, the lower the requirements for transport and the greater space for free countryside and wild nature. From these findings, the European Transport and Environment Federation has derived principal recommendations for urban and regional planning. Various surveys of power consumption in transport have shown an unambiguous link between the population densities, distances between cities and power consumed in transport. The project says: "... the need for travelling sharply declines if the population density of a given place increases to 50 persons per hectare. If the population density is lower than 30 persons per hectare, the dependence on cars seems to be inevitable. The cities with the population density of 17 persons per hectare and with the most decentralised residential structure use 70% more power than cities with 33 persons per hectare and with high concentration of flats" (Greening Urban Transport, 1994⁹). The figures shown are quite clear and supportive of the pragmatic view of the relationship between the country and city centres. From the transport point of view, living in the fresh country air near the nature but with a necessity to commute to the city is much less healthy than living in city centres.

Suburban development, depicting the growth of the city at its outskirts, is closely linked to the process of spatial specialisation and segregation. It entails the concentration of certain branches of industry in certain parts of the city and the concentration of certain groups of population in specific zones of the urban structure. The specialisation and segregation for example lead to an increased distance between homes and places of work. As these processes are usually not co-ordinated and occur independent of the existing transport system, distances are ever increasing, enhance the use of cars and produce disadvantages for public transport (De Boer 1976). This is a gradual process in which public transport loses its meaning

⁹ European Federation for Transport and the Environment (T&E), 1994. Greening Urban Transport. Bruxelles.

and subsequently ceases. As a result, numerous categories of population, senior citizens in particular, have an aggravated access to transport and their spatial mobility is decreasing.

Townscape

The system of characteristics (morphological, formal, natural etc.) that constitute the urban environment that surrounds the people when they use it and move in it.

Traffic

The passage of people or vehicles along routes of transportation; "vehicles" is thereby referring to vehicles on the road, that have to interact, including interaction with pedestrians.

Transport

Transport is conveyance of people or property from one place to another. Modern commercial transport includes all the means and facilities used in the movement of people. The commercial transport of persons is classified as passenger service. Transport is one of the largest industries in the world. Public Transport is the conveyance of large numbers of passengers, whether in urban areas or on the country-side, with the help of vehicles, usually in return for payment of a fixed fare. Also known as mass transit, it is a term covering a wide range of different modes (means of transport). The fare may be paid either at the time of use, or through prepayment. In size the vehicles range from taxis (which may be hired by a single user) up to urban trains handling over 1000 passengers. Systems operate within urban areas, between cities, and between rural areas and urban centres. The term "public" relates to the availability of the service, not to its ownership, which may also be public (for example, by an urban authority), or private (ranging from an "owner-driver", to large companies).

Urban development

Cities have found a new place on the geo-political scene: municipal structure has become a dominant type of structure throughout the world. An ability of cities to integrate and civilise has sometimes collapsed as a result of municipal expansion, supported by rapid economic growth.

The basis is the urban development process: large industrial complexes are established in settlements and grow rather quickly; this means that workforce coming from rural areas can settle there. The development of technology is a key factor influencing the development of a modern city. It enables mass production, distribution as well as consumption of goods. Technological changes in one area are always accompanied by changes in a social structure.¹⁰ For example: changes of economic institutions induce changes in the structure and function of families. Rapid industrialisation brings about the need for a new educational system, which, in turn, produces a number of well-educated and skilled operatives. Industrial development is accompanied by a number of social and economic changes, influencing the speed of urban development. These changes can be measured, for example by measuring the changes of work productivity, participation in political life, participation in management, etc.

¹⁰ "This is not so much the change of the cities, but more the change of the whole society. Rural societies gradually change into urban societies. This metamorphosis does not only concern material and spatial issues, but also institutions, economy, social structure, thinking, ways of life, values and the whole culture" (Horská P., Maur E. & Musil J., 2002. Urban Development of Czech Countries and Europe. Prague.)

In open communities, rapid industrialisation and induced urban development enable a considerable amount of social mobility. The economic growth thereby induces the need for flexible adaptation of economic and social institutions, which can stimulate the economic growth. The political and economic system is thus adjusted to follow the technological changes. Rapid urban development causes radical re-structuring of the social structures.

New technologies and a new social order thereby alter cities into something more than just the centres of government, culture and religion. Settlement structure changes significantly: apart from the development of a capital or several major elements, a number of industrial cities were formed in the past. In the cities themselves, residential development took place in the proximity of factories and centres - due to the underdeveloped public transport. Growth was experienced as a result of developing transport, building railways, constructing water supply and sewage networks, and establishing basic forms of residential development and city formation. A usual form was that of a radial-concentric city - a star-shaped urban conglomeration the arms of which extend in the shape of roads. Industrial urban development culminated by establishing coherent urbanised areas. The term conurbation is sometimes used; this term was invented in 1915 by Patrick Geddes to describe large city regions such as Great London, New York - Boston conurbation or the Ruhr Basin. It is not a statistic concept; it depicts a large city or conglomeration of large cities. In this way, coherent urban and industrial estate is formed. In many cases transport systems provide for the connection of all parts of the conurbation, thus forming a single municipal labour market and traffic channels. The term "urban conglomeration" is also used as well as "metropolis" in the United States.

In Central Europe and in Eastern Europe in particular this process bears some special features different from the general model. In comparison to Western Europe, changes are often delayed by several decades and the transformation of the settlement structure is not so aggressive - depending on various political factors and slow changes in agricultural production. At the beginning, gradually liberated labour force can find only few jobs in the industry. This process is accelerated later on. In some areas, intense urban development takes place during the controlled, so-called "socialist urban development" after the World War Two; optimum infrastructure, however, is not created. The term "suburban development" is used to describe the situation in former socialist countries where the growth of industrial conglomerations is not accompanied by corresponding development of habitation and urban infrastructure to serve the labour force. Urban development is thus delayed as regards two aspects: the number of people working in cities significantly exceeds the number of those who can settle there; this has resulted in a great number of commuters. The level of infrastructure is not in balance with the amount of urban population, and newcomers therefore usually settle in housing estates on the outskirts of the cities.

Even though rapidly growing conurbations in developing countries seem to be the greatest problem, the share of urban population in Europe has exceeded eighty percent; it means that Europe as a whole has reached the "ceiling of urban development". The European Union has responded to this situation by the programs supporting the countryside - i.e., where many elderly live - but good intentions have still remained more or less on paper. It is beyond any doubt that the issue of growing cities will become a central topic for permanent sustainability of life viewed from the environmental point of view.