CRITERIA FOR THE ELDERLY PEOPLE CITY? SIMPLIFY THE COMPLEXITY TO ACT IN CONCRETE TERMS

Marcello Martinoni 1, Alma Sartoris 2

1 i.CUP – institute for the Contemporary Urban Project, Accademia di architettura, Largo Bernasconi 2, CH-6850 Mendrisio, Switzerland, marcello.martinoni@arch.unisi.ch
2 IRAP - Institute for Spatial Development, Hochschule für Technik Rapperswil, Oberseestr. 10, CH-8640 Rapperswil, alma.sartoris@hsr.ch

Abstract: The research "UrbAging – Planning and designing the urban space for an ageing society" focused on the built environment and public space of two Swiss cities, with respect to their adequacy to the needs of the older generations. Thanks to the direct involvement in the participation process, the needs of the elderly people in the public space were identified. The project results are summarized and collected in the "chart of age-friendly public space" and in the interactive web based Decision support system UrbAging (www.urbaging.ch). These tools were developed to provide the partners with a helpful synthetic framework for their field work. The paper presents the criteria underlying this tool. The project is presented in the general framework of the necessary interdisciplinary work in urban planning, the challenges of sustainable urban development, and the demographic shift.

Keywords: Urban planning, ageing society, demographic shift, public space, decision support system

Our future is old and urban. In 2050, for the first time in human history, there will be more people on earth aged over 60 than children between 0 and 14. No continent is exempt from the urbanization process. People in Europe who reach 65 years of age still have a life expectancy of about 16 years; those who reach 80 years of age can expect to live 8 years more (UN, 2007). It cannot be just a meaningless period!

One of the fundamental questions that need to be addressed is the meaning of "elderly". The birth date appears useless, if not in a pension plan perspective. There is a tendency to understand "old" as synonymous with "disabled". Nowadays, to be an elderly person is to be more than 65 years old, more or less recently retired, maybe with some hobbies, hopefully with relatives or friends, and enjoying one's spare time (Wanner et al., 2005). A new perspective has to be developed, in which elderly persons can be seen as actively playing a role in

the urban space, instead of representing a problem (CF 2007).
The concept of successful aging, from a gerontologist's point of view, includes three main components (Rowe et al., 1997): low probability of disease or disease related disability, high cognitive and physical functional capacity, and active engagement with life. But quality of life is generally admitted to be the result of a fruitful interaction with the environment in its different forms, rather than a mere question of health conditions (Barton et al., 2004; Lawrence, 1996; WHO, 2001). Urban studies has to face new challenges: along with the development of necessary infrastructures, social inclusion and liveability will be key factors of urban development (Creedy et al., 2007). A multidisciplinary attitude is therefore necessary to implement sustainable urban policies.

For the urbanist or city manager's purposes, the notions of "frailty" and "autonomy" are the most appropriate. It doesn't matter how old one is, if one is still able to act in one's environment. In fact, "disability" (WHO, 2007b) can be understood as a physical or mental limitation of a person in a specific social context, or as a gap existing between the person's abilities and the environment's demands. Thus, the elderly are far from all "disabled", and the quality of life for elderly persons in the urban context involves many other aspects as outlined by the WHO project "Age friendly city" (WHO, 2007a). However, urbanists building or thinking an urban space have to pay attention to architectural barriers and prevent, as far as possible, disparity in the accessibility of space (Association, 1989; Yerpez et al., 1998).

The Research Project

The research "UrbAging – Planning and designing the urban space for an ageing society[1]" (Acebillo, 2009a; SN 2007), conducted by a team of researchers composed of geographers, architects, and urbanists, focused on the built environment and public space of two Swiss cities with respect to their adequacy to the needs of the older generations. Thanks to the direct involvement in the participation process, the needs of the elderly people in the public space were identified.

Assessing the adequacy of urban spaces, or a city, for older citizens requires a more complete and systematic approach, one that has to integrate the examination of the residential and commercial space and the availability of services. The relevance of the UrbAging research lies in its methodology and in

---

[1] Martinoni M, Sartoris A, Torricelli GP, Sassi E, Molteni E., Schöffel J, Acebillo J, UrbAging: Designing urban space for an aging society www.arch.unisi.ch/index/icup/pdf_urbaging

the importance that public space plays in the assessment of the capacity of a city to generate, maintain, and increase the well-being of the citizens.

UrbAging focuses on the cities of Lugano (Acebillo et al., 2008) in the canton of Ticino, and that of Uster, in the canton of Zürich, both in Switzerland. The detailed analysis of public space and services has been put in parallel with data on the distribution of old population. Distribution of a questionnaire to a representative sample of elders was followed by the gathering of information (Sartoris et al., 2008a, 2008b). After analyzing the results, the research team focused on the selection of some public space on which to make concrete proposals, and on discussion with group (Migliorini et al., 2001) for the deepening of the main thematic related to attendance of public space. With the information gathered, it was possible to identify the needs of older persons to public space, especially about parks, squares and pedestrian routes.

fig.1: Parco Ciani in Lugano, one of the public space studied by UrbAging

Based on the needs expressed by seniors, and on imperatives of the quality of public spaces, concrete proposals were made for selected sites. The project-ideas have led to a direct confrontation with the users, who were able to express their views. During the last workshops we have also organized field visits (Sanoff, 2000) that have provided new perspectives on these projects, as well as more general recommendations.

The interdisciplinary approach used in the research insists on the maintenance of both the systemic and the sectorial perspective. There was interaction between the different disciplines not only on the theoretical aspects, but also on the project proposals, and in the involvement of inhabitants.

All the information processed by the researchers, bibliographical references included, has contributed to the establishment of a list of criteria and recommendations for the city and the elderly. These are summarized and collected in the "chart of age-friendly public space" and in the Decision support system UrbAging. These tools were developed to provide to our partners a synthesis to be helpful in their field work and they represent a concrete implementation of the research project.

fig.2: The researchers in Uster during a particaptory visit of the Schulhausplatz

The chart of age-friendly public space[2]
MANAGEMENT
Governance The city for the elderly is a city for all. Considering the diversity of needs of older people brings benefits to all other people (children, young people, families, workers, entrepreneurs, ...). A renewed governance improve the quality of life and prevent ghettos and exclusions. **Participations** The city for the elderly is built with the elderly.

[2] For other versions of the chart (italian, french, german) see www.urbaging.ch

Elders are an active part of the definition of priorities and projects.

Being old means living in very heterogeneous way, actively involving elderly we can avoid using stereotypes and simplifications.

Transversality

The sectorial coordinated interventions give coherence to the public action.

The actors of urban management (construction, planning, services) consider the needs of older people in the application of sector policies (health services, public green management, public transport, construction, ...).

The quality of life of elders results from personal circumstances, combined with public policies and private initiatives.

CONTEXT

Accessibility

The different parts of the city are easily accessible through public transport and safe pedestrian ways.

The accessibility of public spaces is given by the absence of architectural barriers and the presence of facilitated pedestrian crossings.

Interventions for the construction or renovation of public spaces, buildings or roads must consider the needs of persons with reduced mobility (pavements, slopes, ramps, signs for the visually impaired, flooring, handrails, pedestrian crossings, obstacles, ...).

Clear information allows people with reduced mobility to make up with their own resources or the aid of others persons (family, volunteers, public agencies, ...) to face foreseeable difficulties.

Connectivity

A good connectivity between public spaces can give an added value to the single components of the urban system.

A dense and qualities network of routes promotes pedestrian mobility and leisure.

The routes are attractive if they are safe and scattered with pleasant spaces (benches, water, green, shadow, cleaning, ...) suitable for a break and/or a meeting.

Intensity

The desirable intensity of a public space depends on the diversity of its functions and its position in the urban context.

The intensity degree of use of a public space can be stimulated according to its characteristics (context, type, ...).

The intense use of space, in a virtuous process, motivate further attendance.

SPACE QUALITY

Conviviality

Places that encourage meeting and socialization result attractive and encourage people of all ages to attend them.

A friendly space presents high security conditions.

Flexibility

Public spaces and their furnishings are designed to allow the realization of temporary events (market, concert, show).

Security

The perceived sense of security in an area depends on structural conditions (promiscuity among means of transport, cars or bicycles, dark and narrow alleys, hidden corners, safe pedestrian crossings, ...), on the individual experiences (perceived number of criminal acts) and on the presence of preventive measures (video surveillance, patrols, objective information, ...).

Comfort

The adequate furnishing of a public spaces allows an appropriate, safe and pleasant use of it.

The number and quality of the benches are sufficient and their exposure takes in consideration weather variations (sun, wind, ...) and their context.

The organization of public space takes in consideration the impact of environmental pollution (noise, air quality).

Drinkable water and the possibility of using it as a tool for the game is enhanced.

Toilets of quality and free of charge are available.

Strategic recommendations for age friendly public space

Following the structure of the Chart we describe with more details the different criteria.

Management

Governance: the city for the elderly is a city for all

UrbAging focuses on the needs and requirements of elderly people in public space, but the city for the elderly should remain a city for all. Consider the specific needs of older people in their diversity, taking particularly into consideration the range of needs of the weakest, benefits at the same time many other citizens, children, families and young people. The implementation of the needs of older people into projects, can improve the quality of life offered by a territory and at the same time should prevent the creation of segregation or exclusion. The parks and public spaces, should not be frequented exclusively by older people; in fact, their design and general qualities should encourage the attendance of different groups and encourage intergenerational encounters. The age group of older people includes three or more decades of life and every individual brings with him a story, different needs. Stereotypes and simplifications are counter-productive, and the designing solution should be as individual as possible.

Taking into account individual needs, during designing a project, means identifying the categories of persons (children, families, youth, workers, businessmen, retired couples, elderly) who are particularly affected and sensitive for this concrete space, evaluating also the potential benefits for different

categories.

fig. 3: A moment of direct involvement of eleders in Uster

An analysis of the spatial segregation of particular groups of people and feelings of exclusion (social and/or spatial) is recommended. The potential benefit of a renewed use of the space has to be developed through a project.

Participation: the city for the elderly is built with the elderly

The elderly, whether daily users or rare visitors of public space, are the most able to express their own needs; above all, they know precisely the obstacles and difficulties that they have to face daily in their territory. An involvement of older people in defining needs and consequently the objectives of a project is essential. The city for the elderly is built with the elderly and they must be an active part of the definition of priorities and projects.

Basically there are different possible levels of involvement of stakeholders in different phases of a project, especially during the phase of analysis, and then in the design and the planning (Giovine et al., 2006; Arnstein, S. M., 1969). The degree of useful, desirable and feasible involvement has to be established at the beginning of the process. Depending on the type of analysis, it is possible to involve elderly citizen for a simple collection of their needs, or in an intensive sharing and discussion. In terms of design and planning, there are forms of co-decision procedure and creation of projects and forms of consultation on the

basis of concrete proposals. The choice of the right time of participation in the project and the actors who should be involved represents a central issue. Among actors, beyond citizens, associations and public authorities should be included as representatives of the elderly and guarantors of their interests. In case of the plurality of needs and requirements (socialization, mobility, availability of free time) priority should be given, proportionally, to those with the greatest needs.

Mainstreaming

The factors that make a city or a public space suitable to the needs of the elderly are numerous: adequate offer of housing, goods and services of daily use in the neighborhoods, access to treatments, suitable places for meeting outdoor and indoor, ability to move independently and in particular a solid social network (Kreuzer, 2006; Steffen et al., 2007; Kreuzer et al., 2008; BMVBS, 2007). If a urban space doesn't meet the needs of the elderly, or does not provide a sufficient quality of life, the replacement interventions are important to offer. There are numerous ways to meet these needs and cover transversally different sectors of public body: town planning, housing, social and health services. Create a city for older people require a comprehensive approach.

To consider an active cross-theme of "elderly" involves:

- working within various levels of government;
- partnership contracts among public, private and voluntary sector (for example transport);
- innovative ways of creating and/or management of parks and public spaces;
- incentives for private investors.

Urban context

Accessibility

In order to be attractive, public space must be easily and securely accessible within the district, through safe and nice walking trail from other areas of the city, particularly with public transport and bus stops nearby. The ideal path from the nearest public transport is direct and is short as possible. The dangers on the main routes and entrances to public spaces should be valued and mitigated if possible. The pedestrian crossings regulated by traffic lights must also take into account the longer crossing time by the elderly (such as by detecting the presence of pedestrians that will ensure security by adjusting the length of the green), for instance in "secured ways" specifically signaled.

Direct access to the space must be characterized by the absence of physical

barriers (architectural design elements). A focus only on major projects of urban redesign is not enough: any construction can and should be the occasion to remove obstacles, for example to a curb ramp or a public access. The construction or renovation of outdoor public spaces and buildings should respond to the specific needs of persons with reduced mobility (improvements of sidewalks, slopes, presence of ramps, type of pavement, handrails, pedestrian crossings) and respond to the needs of people with diminished sensory capacity (support through guidance materials, colors, signage for the visually impaired ...).

fig. 4: Le Parco Lanchetta in Lugano, where project poposal were made

Finally, there should be adequate information on the problems and obstacles existing on paths for persons with reduced mobility, so that they can foresee and overcome these difficulties organizing their own means or with the help of other people (family, volunteers, public services).

Connectivity

The city must be perceived as a network of quality that links public spaces rather than a sum of sites suitable to different needs. A good connectivity between public spaces within a city allows appreciating individual sites and encourages walking.

The footpaths are attractive, if they are safe and not interrupted by barriers that cause insecurity and are not difficult to overcome (ladders, tunnels, dark alleys, poor lighting).

The design to ensure the continuity of paths, intervene in the quality and size of the area, on the recognition (orientation), and on signs and materials. The ideal is to create little oasis, pleasant places, welcoming and of a quality that invites you to take a rest along existing, or new, pathways. The oasis is made up of a number of elements that are repeated throughout the network of footpaths (benches, water, vegetation, adequate lighting, trash containers, shelters against sun, rain and wind and toilets). Elements of furniture are not necessarily always the same and can express the specificity of individual places.

A network of attractive paths, by the way, encourages attendance, not only for entertainment but also to deal with daily activities. The busier the place or route, the greater the possibility of random meetings is. The feeling of safety, under certain conditions, also increases the frequency of attendance.

Intensity

Urban spaces and squares, in particular, must be living spaces, linked to the presence of people and activities of consumption and trade. The presence of bars, restaurants, shops, public services, etc., favors the attractiveness and frequency of squares (Paravicini et al., 2002).

The intensity of use of different types of public spaces varies according to the position of the site in the urban fabric and the diversity of its functions. Some public spaces can be adapted to the need of peace of mind, for example, which does not mean empty space at all, but has to be arranged for (Borja et al., 2003; Di Franco, 2005; Gehl et al., 2001; Jacobs, 1964). In case of certain squares and streets, urban uses should be more intense. Inserting commercial activities on the ground floor (bar and small shops) and increasing the mixing function (housing, equipment, services) contribute to generate more intensity in the urban space.

Quality of space

Conviviality

To the convivial nature of a public space contribute different elements, for example the distribution and quality of urban furniture (see chap. comfort), vegetation and water elements, the perceived sense of security, diversity of uses etc.

From the perspective of older people, it is important that the public space encourages attendance by several generations. The possibility to socialize, partly linked to an intense use of public space, is the sign of a friendly place.

The public space has to be intergenerational and to support activities that promote the interaction.

The suitability of space for children and adults may be expressed through the architectural design as a reflection and a support for this function of public space. Providing resting areas and seats for groups and not separate units can make easy socialization. The design of streets and public spaces should put emphasis on a functionality of areas as meeting place. This can be achieved by restructuring the existing pedestrian, or by designing a new space with better quality (eg little oasis).

Flexibility

Public spaces and their furnishings can be designed to allow flexibility in their use in order to ensure the possibilities to create temporary events (market, stall, screen, concert, show etc.). The attention to flexibility must clearly be balanced with other needs that exist around the public space. Flexibility involves the installation of the technical infrastructure (water, electricity) and the presence of sufficient spaces and accesses that allow the installation and dismantling.

Security

The use of public space is strongly influenced by the feeling of security (Boisteau, 2005; Flückiger et al., 2006; Zani, 2003). The feeling of fear or insecurity depends on the subjective perception of dangers, the presence of preventive measures and the actual situation as regards the acts of petty crime or the risks of falls and accidents.

The presence of bicycles on footpaths makes pedestrians insecure. Combination of walking and cycling on the same place must be reduced, possibly by separating the paths. On the other hand, where possible in public spaces, should be created substantial areas for encounter for pedestrian, for example by creation of pedestrian zone (20 km/h). The quality of the pavement is important to avoid the risk of falls. In addition the pavement and the cobbled paving can create difficulties for the elderly by increasing the risk of tripping over. In dark alleys, streets and subways is important to ensure an adequate lighting and along the main routes to ensure uniform illumination. The alternation of light, shadow and high-beams should be avoided. In some cases, placing windows or decorations in the subways can contribute to a greater attractiveness.

The subjective perception of security is very important on the practical uses of public space, therefore is useful to make inquiries among the population (places, times of day, patterns of anxiety etc). In parallel with this collection of information, it may be necessary to collect and provide accurate information on existing real dangers.

Comfort

The concept of comfort concerns the material qualities of space, but is also influenced by environmental conditions and by the foresighted practices linked with a particular area (Rogora et al., 2005). The appropriate use of public spaces, safety and pleasant, is influenced by several factors that should be considered in the design:

- the presence of shade especially with tall trees and the possibility to shelter in case of rain (roofing, canopies, pergolas, "sails");
- niches with different environmental conditions, through the use of vegetation designed to meet the needs of most users;
- visual and acoustic screens that separate the public space by roads with high traffic, while retaining the accessibility and visibility and avoiding the creation of secluded places;
- benches with backs and armrests and a seat not too inclined (difficulty in standing up);
- preferably wooden painted benches that allows a rapid drying, avoiding metal benches that are too cold or too hot;
- drinking water and jets of water at a height appropriate to the needs of children (and/or dogs);
- use of water for games and to create atmosphere;
- the presence in public spaces of public toilets, favouring models self-cleaning or made with materials easily washable;
- information on the location of public toilets;
- avoid the toilets underground (difficult to access and sense of insecurity).

Decision support system: simplifying the complexity

We live more and more in a complex systems and no person—or institution—can pretend to manage all the useful information easily (Chalas, 2005). The factors that make a city or an appropriate public space suitable for the needs of the elderly are very numerous: adequate provision of housing and goods and daily services in neighborhoods, access to nursing benefits, suitable indoor and outdoor places of meeting, the ability to move independently, and in particular a

solid social network.

The subjects confronted by our research, through activation of many sectorial skills, pointed out the difficulty of transmitting knowledge to those who worked concretely on the ground. This complexity demands an ability to understand the various territorial and social situations for the implementation of appropriate measures, and imposes to recognize the importance of an overall vision, a vision that can hardly come from a single disciplinary knowledge.

fig.5: the welcoming page of the interactive Decision Support System

In order to make explicit the general principles, one helping tool was developed to help in decision-making and designing (Burstein, 2008), which brings about concrete considerations relating to the territory. The difficulty is, in fact, to make tangible, operational, and useful the considerations emerging from the research for those who think and build the city every day. The public space on a scale for the aged person is certainly attainable with a fair dose of common

sense, but the sectors and needs to be taken into account at the same time, are countless. It is impossible to answer unequivocally to the question: how should it be built the city for elderly people? It is a matter of method, approach and this is why the research wished to focus on the elaboration of a tool for helping the decision-making process. The tool intends guiding the designer, the manager in charge or the consultant to reflect, through 60 material questions, on the relevant criteria to create a public space adequate to the elderly people needs, always maintaining a global vision on the issue.

The instrument is an "aid to decision-making"; it represents a simplification of the complexity and the awareness that there is no universal solutions easily implemented in different public spaces. The lack of easy-to-use solutions demonstrates the increasing necessity to promote the cultural and mental attitudes facing the city and the elderly. We do not expect the dissemination of standard solutions; we imagine heterogeneous answers that lead to different, but appropriate, design solutions.

Conclusion

Urban space faces many different challenges at the same time. The rapid growth of the “cities”, that generate the urban sprawl, the demographic shift and the quest for enhancement of quality of life are linked together.

UrbAging, while focusing on public space, has permitted to address a larger discourse about the relationship between urban space and the ageing society. The progressive ageing of population concern the society and territory in its entirety. In the urban context (peri- and sub-urban areas included) the density of population on one hand, and the possibilities of intervention on the built environment on the other, influence the quality of life and bring the question of aging into view from a particular perspective.

Concluding this paper, we want to outline three considerations raised up with the research:

1. an analysis of urban ageing society with the lens of sustainability;
2. the needs of interdisciplinary approach for urban management;
3. the importance to consider public space in a networked livable city.

Assessment of sustainability

The findings emerged from UrbAging can be summarized and evaluated through the key provided by the sustainable development concept. In detail:

<u>Society</u>

A city also caring for elderly is:

- offering opportunities to meet and foster intergenerational relationships;
- strengthening the social network (help and socialization);
- activating participation, increasing sense of responsibility, sharing and co-decision;
- fighting isolation and the sense of loneliness;
- stimulating social cohesion through appropriate relations between public and private space (keep the place of residence during the different stage of life, ...);
- stimulating and enhancing sense of belonging to community;
- considering a role of civil society in the management of the territory;
- promoting the independence of the elderly;
- make use of the knowledge and life experience of elderly, seen as an active actor;
- paying attention to security conditions (both in the perception and effective);
- having ability to mitigate architectural barriers and their effects on persons with reduced mobility;
- increasing equity of urban space by promoting freedom of movement and choose of place of residence to all citizens.

Environment

A city also caring for elderly persons is:

- reducing the environmental pollution due to the efforts to ensure comfort (control/mitigation);
- increasing the quantity and quality of urban green spaces to ensure adequate public space, through the creation of new spaces or restoration and enhancement of natural compartments;
- developing integrated city and neighbourhood that allows short paths due to proximity;
- creating space easily travelled on foot or by bike through a dense network of attractive pedestrian pathways;
- developing new buildings with mixed uses and integrated into the urban fabric, which reduces the polarization of the area and consequent traffic generated;
- improving the accessibility of services, public space and residence without having to resort to private transport.

Economy

A city also caring for elderly persons is:

- increasing collaboration between private and public sector to respond efficiently to the needs of care, residential needs, and services related;
- involving a greater interconnection between space and a higher intensity, resulting in lower costs of urbanization;
- paving the way for a better quality of life and aging in good health with fewer health care costs;
- increasing the efficiency through the residential area qualities, better connectivity and appropriate use of space (average size apartments, adequacy of space or neighbourhoods for different stages of life);
- building a social context in which it recognizes and enhances the potential value and the resources represented by the elderly in terms of competence, wisdom and time available;
- insuring an efficient use of space (public and private) with consequent increased sustainability of investments (fight the problem of districts villa converted into new dismissed urban areas);
- improving the ability to provide adequate responses to the various available fund by ensuring the diversity of the economy fabric and its strength.

Meaning and relevance of interdisciplinary work

Urban studies are basically an interdisciplinary science, although the different discipline tends somehow to isolate specific scientific disciplinary approaches. It is a matter of cultural approach concerning the ability and the readiness to enter into a dialogue. It's all about attitude. Architects have to do architecture, if they manage to define the place and the objectives; social scientists have to study society, if they are able to find a serious theme to be addressed; citizens will still have to be the backbone of the city, whatever age they are. Shakespeare, in Coriolanus, makes Sicinius ask "What is the city but the people?" which means, at least, that without people it is not possible to build and to manage a city. Any urban space is mainly driven by the constant input of its inhabitants, in parallel with the authorities that, in the best figure, represent them. Technicians and scientists have certainly a role to play in the assessment and in the technical advisory, but the attention to the needs of the "clients/users/citizens" is more and more important, and should further improve.

A growing willingness to cooperate is needed among various professionals, in particular among those who are involved, in actual fact, in the construction of physical space. Architectural projects able to bring valuable solutions to technical or sociological problems thus represent a key issue to reinforce the quality of public space, and, in the end, the quality of the whole city.

The public space in a networked, livable city

Public space plays a crucial role in the quality of a city or an urban space, however the quality of life of a person depends on several factors (WHO, 2003). From a territorial, planning, and design aspect, outdoor public spaces must be definitely considered (Martinoni et al., 2009). In the meantime, a broader sense of "public space" that includes shops and services, residential areas and private or semi-private spaces, facilities such as clubs and meeting points for older people should be reinforced.

The network, linking residential area and public spaces, is one aspect to be considered. In the next decades, cities will need solid criteria to improve the quality of public space, and the efficiency of the urban system, in terms of accessibility and intensity.

The residential real estate market plays a major rule in the suitability of an urban space: how is the urban system built and where are the different functions located? A focus on ageing society promises the ability to respond to growing social and care service needs. Where a territory's premises do not meet the needs of the elderly, personalized services can meet these needs, within the various administrative sectors of town planning, housing, social services and health.

To focus on the quality of the built environment is also to be aware of the importance of intergenerational relationships, which build a stronger and more socially equilibrated society. The built space can encourage those relations in certain conditions. A suitable mix of functions, and accessibility to the same places for different social and generational groups, are the keys criteria for a built space that can contribute to the social equilibrium of a society.

A senior-friendly city is a city for everyone, a universal city that results from the human diversity that lives it and constitutes it. It is a networked city in which taking into account the more demanding target population can help creating favorable conditions to the majority of the population.

References

Acebillo, J. & Maggi, R. et al. (2008) La nuova Lugano, visions, challenges and territory of the city, Mendrisio: Università della Svizzera italiana, Accademia di architettura.

Acebillo, J. (2009b) Gli anziani e la città. Atti del convegno: Potenzialità e nuove sfide 2050, un'Insubria di anziani, una sfida per i nostri valori. Convegno

2: Conseguenze dell'invecchiamento nella società civile, Bellinzona - Venerdì 23 gennaio 2009, Bellinzona: Coscienza Svizzera (not yet published).

Acebillo, J. (2009a) Urbaging: Designing urban space for an ageing society, Final scientific report to the Swiss national science Foundation, Mendrisio 12.02.2009 (not yet published).

Arnstein, S. M. (1969) A Ladder of Citizen Participation, in: Journal of the American Institute of Planners 35.4, pp. 216-224.

Association suisse des invalides (1989) La costruzione adatta agli andicappati, norma SN 521 500 con manuale, Olten: Associazione Svizzera degli Invalidi.

Barton, H. & Tsourou, C. (2004) Urbanisme et santé. Un guide de l'OMS pour un urbanisme centré sur les habitants, Rennes: Association internationale pour la promotion de la Santé et du Développement Durable.

BMVBS, BBR (2007) Stadtquartiere für Jung und Alt. Berlin: Bundesministerium für Verkehr, Bau und Stadtentwicklung, Bundesamt für Bauwesen und Raumordnung.

Boisteau, C. (Ed.) (2005) Sécurité, dynamiques urbaines et privatisation de l'espace à Johannesburg, Cahiers du LaSUR no 7, Lausanne: LaSUR.

Borja, J. & Muxí, Z. (2003) El espacio público ciudad y ciudadanía, Barcelona: Electa.

Burstein, F. (2008) Handbook on decision support systems, Berlin: Springer.

CF (2007) Strategia in materia di politica della vecchiaia, Bern: Consiglio Federale.

Chalas, Y. (2005) L'imaginaire aménageur en mutation cadres et référents nouveaux de la pensée et de l'action urbanistiques ; contribution au débat, Paris: Hartmann.

Creedy, A. & Zuidema, C. et al. (2007) Verso città vivibili - Guida alla gestione urbana sostenibile.

Di Franco, A. (2005) Città e spazio pubblico, Milano: CLUP.

Di Giovine, M. & Ayuso, M. et al. (2006) Manuel européen de la participation, Roma: Réseau Partecipando.

Flückiger, A. & Pierroz, L. et al. (2006) Vidéosurveillance et risques dans l'espace à usage public : représentations des risques, régulation sociale et liberté de mouvement, Genève: Centre d'étude de technique et d'évaluation législatives, Université de Genève.

Gehl, J. & Koch, J. (2001) Life between buildings using public space, Copenhagen: Danish Architectural Press.

Alma Sartoris and Marcello Martinoni (2008a) Urbaging NFP54: Indagine presso la popolazione anziana di Lugano sull'utilizzo degli spazi pubblici all'aperto, IRAP Rapperswil, i.CUP Mendrisio, giugno 2008 (http://www.irap.ch/Siedlungsentwicklung-und-Staed.3769.0.html retrieved 14 May, 2009)

Alma Sartoris and Marcello Martinoni (2008b) Urbaging NFP54: Schriftliche Befragung der älteren Bevölkerung zur Nutzung von städtischen Freiräumen und Grünanlagen in Uster, IRAP Rapperswil, i.CUP Mendrisio, Juni 2008. (http://www.irap.ch/Siedlungsentwicklung-und-Staed.3769.0.html retrieved 14 May, 2009)

Jacobs, J. (1964) The death and life of great american cities the failure of town planning, Harmondworth: Penguin Books in association with Jonathan Cape.

Kreuzer V. (2006) Altengerechte Wohnquartiere – Stadtplanerische Empfehlungen für den Umgang mit der demographischen Alterung auf kommunaler Ebene. Dortmunder Beiträge zur Raumplanung 125, Dortmund: Blaue Reihe; IRPUD.

Kreuzer, V. & Reicher, C. & Scholz, T. (ed.) (2008) Zukunft Alter Stadtplanerische Handlungsansätze zur altersgerechten Quartiersentwicklung, Dortmunder Beiträge zur Raumplanung 130, Dortmund: Blaue Reihe; IRPUD.

Lawrence, R. J. (1996) Wanted : designs for health in the urban environment.

Martinoni, M. & Casabianca, A. (2009) Les déterminants urbains de la santé: pour une réhabilitation de l'espace construit, in: Actes des Journées d'échange international: Accessibilité urbaine pour les personnes à mobilité réduite, Genève (not yet published).

Migliorini, L. & Rania, N. (2001) I focus group - uno strumento per la ricerca qualitativa.

Paravicini, U. & Claus, S. & Münkel, A. & von Oertzen, S. (2002) Neukonzeption städtischer öffentlicher Räume im europäischen Vergleich – Forschungsbericht. Wissenschaftliche Reihe NFFG; Bd. 3, Hannover.

Rogora, A. & Dessì, V. (2005) Il comfort ambientale negli spazi aperti, Monfalcone: EdicomEdizioni.

Rowe, J. W. & Kahn, R. L. (1997) Successful aging. Gerontologist, 37(4), pp. 433-440.

Sanoff, H. (2000) Community participation methods in design and planning, New York: John Wiley.

SN Schweizerischer Nationalfonds (2007) Nachhaltige Siedlungs- und Infrastrukturentwicklung. Poträt des Nationalen Forschungsprogramms NFP54 – Supplement, p. 7 (www.nfp54.ch/ retrieved 30 April, 2009).

Steffen, G. & Baumann, D. & Antje, F. & Weeber + Partner (2007) Attraktive Stadtquartiere für das Leben im Alter. Bauforschung für die Praxis, Band 82, Stuttgart: Fraunhofer IRB Verlag.UN (2007) World population ageing 2007, New York: United Nations.

Wanner, P. & Svizzera: Ufficio federale di statistica (2005) Âges et générations la vie après 50 ans en Suisse, Neuchâtel: Office Fédéral de la Statistique.

WHO (2001) City health development planning, Copenhagen: WHO - Center for Urban Health.

WHO (2003) I determinanti sociali della salute - I fatti concreti, Trento: Giunta della Provincia Autonoma di Trento.

WHO (2007a) Global age-friendly cities : a guide - Ageing and life course, family and community health.

WHO (2007b) ICF-CY : international classification of functioning, disability and health : children & youth version, Geneva: World Health Organization.

Yerpez, J. & Institut national de recherche sur les transports et leur sécurité (France). Colloque (1998). La ville des vieux : recherche sur une cité à humaniser, La Tour d'Aigues: Ed. de l'Aube.

Zani, B. (2003) Sentirsi in/sicuri in città, Bologna: Il Mulino.