DESIGN OF PUBLIC SPACE IN THE CITY OF THE ELDERLY

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Abstract: The Research “UrbAging - Designing urban space for an aging society” has investigated the needs of the elderly in relation to public space in two case studies, Lugano (TI) and Uster (ZH). Its objective was to assess the suitability of public space - understood as an event-structuring of urban form - in relation to the needs of the elderly population; and to develop strategies for the integration of these needs at the level of urban design.

The presentation discusses the issues related to the physical form of public space and the criteria for their project. The text consists of three sections: the first outlining the procedures for the establishment of general criteria that we considered relevant to the design of public space, the second providing criteria for the design of public spaces, the third demonstrating the project proposals.

Keywords: Public space, urban design, public space design criteria, ageing society, urban paths.
Research

The Research project “UrbAging - Designing urban space for an aging society (*)” has investigated the needs of the elderly in relation to the public space in the cities of Lugano (TI) and Uster (ZH). The research is included in the National Program 54 “Sustainable Development of the built environment” (PNR 54) of the national fund of scientific research that has lasted two years (1.1.2007 - 31.12.2008). Its aim was to evaluate the suitability of public space, understood as a structuring event of the urban form, in relation to the needs of the elderly, developing strategies for the integration of these needs into the urban design.

Conducted by i.CUP (institute for the Contemporary Urban Project) of the Accademia di Architettura USI and by IRAP (Institut für Raumetwiklung) of SUP of Rapperswil, UrbAging proposed to investigate the views of the elderly with regard to the perception and quality of public spaces, with particular attention to the relationship between built environment and life quality. Through a survey of the degree of satisfaction, conducted with the Municipality - which has been involved from the earlier stages onward - UrbAging intends to make proposals actively involving the population. A city designed for and with the elderly through the issue of quality of public space and the satisfaction of cultural needs and the needs of socialization will be - from the perspective of sustainable urban development - a city for all.

The objective was to analyze “the ageing issue” in a systemic approach and in relationship with the built environment; to identify the specific territorial and mobility-related needs of elderly residents, based on in-depth knowledge of the communal territory and its intrinsic quality, was one of the main challenges of the research. According to sustainable development methodology, beyond the participation, the social, ecological, and economic impacts are central criteria to consider. The real improvement of suitability of the built space for elders is possible through their direct involvement and the commitment of local authorities.

The research also pursues the objective of investigating, within a project-oriented research, a contemporary field in urban studies that puts social science and architecture in direct dialogue. The significance of the project lies in enabling Swiss cities to cope with the changing demographic structure of their population and the uninterrupted growth and sprawl of urban areas. Indirectly, this scenario will bring substantial benefits by reducing costs for elderly services and care and improving the well-being of these groups. The demographic scenario that foresees a substantial increase of the elderly population (by 2040, a quarter of the Swiss population will be more than 65 years old) puts strong pressure on urban organization and spaces which have been designed for the needs of the working population and families. In this context, the project goes beyond the provision of specific services for elderly – homecare services, dedicated transportation, etc. – towards the integration of elderly needs into urban planning.

The emphasis placed on the adequacy of public space shows the intention to deepen a single aspect of the urban territory by combining the different scientific approaches. Assessment of the adequacy of urban spaces or the city for older citizens requires a more complete and systematic approach, which 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 the importance it places on the role of public space in a city’s capacity to generate, maintain, and increase the well-being of its citizens.

Urban space faces many different challenges at the same time. The rapid growth of “cities,” the demographic shift, and the quest for enhancement of quality of life are linked together. The network that links residential areas and public spaces is one aspect to be considered. In the next decades, these 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 a urban space: how is the urban system built and where are the different functions located? To focus on an aging society entails scrutiny of the city’s ability to respond to growing social and care service needs. To focus on the quality of the built environment is 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 under certain conditions. A suitable mix of functions, and accessibility to the same places for different social and generational groups, are key criteria for a built space that will contribute to the social equilibrium of society. Each of these aspects tends in a different manner toward a more sustainable urban space.
In a first step, the project has provided an analysis of public spaces, public services, and transportation systems, using geographical data and matching this data with the data on the distribution of the elderly population. Secondly, the project has sought to identify the needs, uses, and satisfaction of the elderly with public spaces based on interviews and participatory meetings. The results have been discussed together with representatives of the municipalities, planning authorities, and elderly citizens in order to identify the major needs and to evaluate the design options proposed by the project group. The dissemination of the results has already begun, thanks to the concrete approach, which entailed direct contact with municipalities and interest groups. The dissemination will be further developed after the conclusion of the research, through publications, conferences, and consultancy for public administrations.

The research has followed four phases responding to the following questions:

*Phase 1 – Localizations:* How are the public spaces and the services distributed in the actual built environment? Where do the old and the oldest live? How accessible is public space by means of the public transportation system?

*Phase 2 – Uses:* How are existing public spaces and leisure facilities used? Is this use satisfactory for the elderly citizens (in terms of socialization and accessibility)?

*Phase 3 – Adequacy:* How adequate is the actual built environment for the elderly (in terms of public space and its accessibility)?

*Phase 4 – Proposals:* Through which projects or management approaches might the suitability of the urban space for the elderly be improved?

Interaction between different disciplines occurred not only on the theoretical aspects, but also on the project proposal and during the interaction with inhabitants. The different practical and theoretical approaches both work within in the general framework of sustainable development. Development of the age-friendly city demands a strong commitment towards the major challenges of sustainability in our society and in the urban systems. The applied research insists on a continuous confrontation with reality and its changing needs. The concrete implementation of scientific findings aims at a stronger relationship between science and society, in which participatory tools are helpful. The multidisciplinary approach involves geographical, architectural, and urban sociology methods. The methods used included both quantitative and qualitative approaches.

The research began with a **statistical** and a **geographical** overview of the two case studies. The geo-statistical and territorial data covered a wide range of topics. **Demographics analyses** were based on the Swiss national census of
2000 (individual, buildings and domestic economy), which permits a very refined spatial analysis since all the data are geo-codified. Variables mapped and analyzed include age, sex, social status, nationality, social or economic activities, recent relocation, composition of the domestic unity, and type of building. With this data, using the IRAP's model of “communal demographic evolution scenario” based on the observed previous population development (birth rate and migrations), we have developed demographic scenario. For a more current vision we also had access to the up-to-date (2006 and 2007) municipal data of population. The quality of the built environment included distribution of the public spaces, of the services (Swiss enterprise census: 2001–2005) such as health care, wellness centers, retail trade, sport facilities, restaurants and bars, shopping malls, theatres, cinemas, municipalities, municipal libraries, and schools. The localization of public spaces concerned places traditionally defined as public space (streets, squares, and parks). The public transport network, crossed with demographic data, yielded maps of accessibility.

In parallel with the geographical overview, an architectural description was made in the field based on a selection of public spaces. The architectural analysis collected data on physical aspects of the territory (accessibility, comfort, services, playground, toilets, …) and also sought some idea of the functionality of the different spaces. Quantitative and qualitative facts have been collected through a written questionnaire, sent to a representative sample of the elderly population. The investigation permitted to collect data on the use of the build space, the perception of the neighbourhood and the use of the different transportation means. Finally, we collected a large amount of data during participatory meetings with the population. On one hand, we could specify the information from the questionnaires, and on the other hand, we gained new information about general topics or about single spaces and the foreseeable possibilities to improve its quality through an architectural project.

UrbAging has permitted a study of the urban space by means of an architectural and urban design approach, taking into account the needs and the behaviour of elderly citizens as seen through an interdisciplinary lens. The research has developed, and deepens, a procedure for the analysis of public space and the improvement of its quality. The organization of the built environment and its quality have been investigated through architectural and geographical methods, demonstrating the potential synergy between disciplines. The combination of different methodological approaches confronted the challenge of how to reconcile the collective and territorial issues with an individual and architectural dimension.
Chart of age-friendly public space

An outcome of the research has been the “Chart of age-friendly public space,” in which ten different criteria have been identified, concerning three different scales of intervention: management, background, and space quality. The first (management) is related to the governance realm; the second (background) concerns the relationship between the physical spaces and their contest; the third (space quality) directly concerns the architectural design aspect of the public space.

The “management” scale intervention criteria are “governance”, “participation”, and “transversality”.

Governance: the city for the elderly is a city for everyone. Considering the diversity of needs of older people brings benefits to all other people (children, young people, families, workers, entrepreneurs). A renewed governance will improve the quality of life and prevent ghettos and exclusions.

Participation: the city for the elderly is built with the elderly. Citizens are an active part of the definition of priorities and projects. Being old means living in very heterogeneous way, by actively involving the citizens, we can avoid using stereotypes and simplifications.

Transversality: the sectoral 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 an old person results from the circumstances, combined with public policies and private initiatives.

The “background” scale intervention criteria are “accessibility”, “connectivity” and “intensity”.

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 easier pedestrian crossings. Interventions for the construction or renovation of public spaces, buildings or roads must consider the needs of people with reduced mobility (pavements, slopes, ramps, signs for the visually impaired, flooring, handrails, pedestrian crossings, obstacles). Clear information will allow people with reduced mobility to make up for predictable difficulties by means of their own resources or with the aid of others (family, volunteers, public agencies).

Connectivity: a good connectivity between public spaces provides an added value to the single components of the urban system. A dense network of routes and qualities promotes pedestrian mobility and leisure. The city should be considered as a dynamic space composed by areas and flows. The quality of the
paths is as important as the quality of individual elements combined. The different parts of the city are easily accessible through public transport and safe pedestrian connections. The routes are attractive if they are safe and strewn with pleasant spaces (benches, water, green, shadow, cleaning, ...) suitable for a break and/or a meeting. The Kleine Oasis (small oasis) is a concept that promotes the possibility of stopping in quality places along the paths. It consists of a number of elements that are repeated throughout the network of footpaths (toilets, benches, water, green, adequate lighting). Items of furniture are not necessarily always the same, but may express the specific nature of individual places.

**Intensity:** the desirable intensity of a public space depends on the diversity of its functions and its position in the urban setting. The degree of intensity of use of a public space can be stimulated according to its characteristics (context, type, ...). The intense use of space, in a virtuous process, prompts a repeated attendance. Urban spaces (squares) must be living places, linked to the presence of people and activities of consumption and trade. The introduction of commercial activities on the ground floor and the increasing of functional mix can improve physical quality and connectivity of the place.

The “space quality” scale intervention criteria are “conviviality”, “flexibility”, “security” and “comfort”.

**Conviviality:** the places allowing meeting and socializing are attractive and encourage people of all ages to attend them. A friendly space has high security conditions. Public space should be intergenerational, should encourage activities that promote the meetings, include spaces for playgrounds for children and adults. The design of streets and public spaces must pay attention to the concept of conviviality and meeting places by restructuring the physical space of pedestrian paths or designing new spaces with better quality (Kleine Oasis).

**Flexibility:** public spaces and their furnishings are designed to allow the realization of temporary events (markets, concerts, shows) and must be prepared technically with the presence of water and electricity connections. It’s also important to arrange the space to facilitate the dismantling of temporary structures.

**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 experienced individual (perceived number of criminal acts) and on the presence of preventive measures (video surveillance, patrols, objective information). The underground public toilets are avoided, and unsafe. The subways too are perceived as unsafe places. Improve the appearance of subways with the presence of lighted windows on the walls, adequate lighting, materials and luminous colors, avoiding alternation of shadow and light along the paths.
**Comfort:** the adequate furnishing of a public spaces allows an appropriate safe and pleasant use of it. The number and quality of the benches should be sufficient and their exposure takes into consideration weather variations (sun, wind) and aspects of the context, such as the presence of green as a qualifying element. The organization of public space takes into consideration the impact of environmental pollution (noise, air quality). Presence of drinkable water, presence of free clean toilets, and absence of cars are also important comfort factors.

**Proposed interventions**
On the basis of general recommendations that emerged during the research, six “study design proposals” have been developed. The most significant criteria taken into consideration for the selection were: the desire to walk (contact with water and nature) and the importance of the connection path between the most attractive and interesting areas, importance of pedestrian movement within the city. The selected areas for the proposed interventions belong to two different scales: paths, places. In both cities the proposed interventions on paths aimed to re-qualify the promenade along the river course: one along river Aabach, Uster; the other along river Cassarate, Lugano. Concerning selected places for proposed interventions, two of them are public spaces connected with the lake: Schifflände, Uster; Lanchetta garden, Lugano; the other two are urban spaces linked to the square typology: Schulhausplatz, Uster; Molino Nuovo Square, Lugano.
Map of Uster showing proposed interventions.

The map shows the areas where interventions were focused. They concern the Schifflände (1), a pier at the end of the trail that leads to the lake, the Schulhausplatz (2) which overlooks the school and a residence for elderly, inserted along a pedestrian path connecting the center of the city to the cemetery and the path along river Aabach, which crosses the town.

Map of Lugano showing the proposed interventions.

The map focuses on the intervention’s areas in the city of Lugano. They include the Piazza Molino Nuovo (1), located on the north of the center, connected by a path traced on the main road leading to the lakefront; Lanchetta garden (2) that overlooks the lake and serves as a pier for the boats, the path along the river Cassarate that crosses the entire city and serves as a north–south axis.
Path 1 - Uster, along the river Aabach

**Current status:**
the current path along the river Aabach, which crosses the town, is characterized by a lack of continuity: it is not possible to walk along the river (no public land and buildings huddled to the levee).

**Proposed interventions:**
- restoration of recognizability of the path through the definition of the pavement;
- restoration of the continuity of the trail by building a bridge located above the riverbed;
- inclusion on the route of "little oasis" (offer of toilets, places to stop, fountains, benches);
- construction of railings and handrails where necessary, to ensure greater safety for pedestrians.
Path 2 - Lugano, along the river Cassarate – bridge in “Via Ferri”

**Current status:**
the current path along the river Cassarate (left bank) is oriented north-south and crosses the city from the periphery to the center. It is narrow, not very accessible, has low connectivity, is isolated and causes a high perception of insecurity. Public lighting is almost absent; along the route there are no public toilets. It is sparsely attended.

**Proposed interventions:**
- inclusion of ramps on the bridge linking the left and the right banks to remove architectural barriers;
- enlargement of the section of the space for the pedestrian path (moving, where possible, of remind or hedge fencing);
- improvement and enhancement of lighting;
- placement of "Kleine Oasis" along the way (offer toilets, places to stop, fountains, benches);
- planting of trees to provide shade and shelter.
Path 2 - Lugano, along the river Cassarate

Current status:
the entire path is very narrow, making uncomfortable the promenade. The path is not easily accessible, because of the low number of contact points with the urban net (low connectivity).
Some parts are isolated and poorly lit, factors that contribute to generate a high sense of insecurity.
Public toilets are totally absent along the entire pathway.

Proposed interventions:
changes aim to improve connectivity, accessibility and comfort:
- enlargement of the pedestrian pathway section by moving, where possible, fences (ramins or hedges);
- placement of "Kleine Oasis" along the way in order to provide toilets, places to stop and rest, fountains, benches and lighting.
**Place 1 – Uster, Schifflände**

**Current status:**
the Schifflände is a pier, and it is located the end of the trail that leads to the lake (see Route 1 – Along the river Aabach). It hosts a stop of public transport and a small public exercise (bar). The public exercise practices irregular schedules; the lighting is low and there are no toilets. This is an area whose strong change in frequency is subject to seasonality and weather conditions.

**Proposed interventions:**
- increase the intensity of use in low season and by bad weather through better provision of services (bar, restaurant)
- equip the space with facilities for temporary events (festivals);
- improve the lighting;
- include a "Kleine Oasi” and increase the amount of sittings;
- strengthen the connection with the centre and improve the perception of space.
Place 2 - Lugano, garden Lanchetta

Current status:
the "garden Lanchetta" is a public space near the lake where a pier for private boats is also situated. It is the only public space in Lugano which houses a bar/restaurant overlooking directly the lake, has great potential and could be more popular. It is a space equipped with a playground and an underground public bathroom.

Proposed interventions:
- creation of a "Kleine Oasis" and replacement of underground public bathroom (not used) with a ground floor one;
- construction of a pergola to provide protection and shelter;
- creation of a "green barrier" to increase the sense of security, protect the area from the noise of traffic, while allowing free viewing of the lake from the road;
- placement of trees in special tubs designed to serve also as benches;
- increase the connectivity of the pedestrian system linking more sensitive space to the network of existing paths.
**Place 3 - Uster, Schulhausplatz**

**Current status:**
space that overlooks the school and a residence for the elderly. It is inserted along a pedestrian path connecting the center of the city to the cemetery. There is a restaurant but the intensity of use of the place is low.

**Proposed interventions:**
- increase the functional mix (housing, equipment, services) to develop business, life, animation;
- exploit the presence of the school and residence for the elderly to foster intergenerational space and activities that promote the meetings (include games furniture for children and adults);
- increase the number of benches with back and arm-rest;
- insert a "Kleine Oasi" with a toilet, the presence of a tub of water, greenery and a pergola to provide protection and shelter;
- improve the quality and quantity of lighting.
Place 4 - Lugano, Piazza Molino Nuovo

Current status:
Piazza Molino Nuovo is not perceived by the population as a real square. It is difficult to access, surrounded on three sides by roads with heavy traffic. A huge fountain is placed in the middle of the square, its noisy and the position don’t facilitate the conversation. Under the fountain there is a public toilet (unused). The quantity of benches and green areas is considered insufficient. Part of the surface is used as parking, the presence of cars is perceived as a nuisance.

Proposed interventions:
- elimination of parking surface, construction of underground park;
- elimination of the fountain, replaced by a plane surface of water that defines the space;
- different flooring (hardwood flooring/floor permeable) to characterise the space and allow various activities and construction of areas for the game;
- creation of a "green barrier" to increase the sense of security and protect the area from traffic noise;
- replacing existing underground public bathroom with the services on the ground floor;
- arrange in order to allow realisation of temporary events;
- foster the intensity of use due to the presence of bars and small shops on the ground floor.
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