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BOOK OF ABSTRACTS

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Age friendly urban environments or city and sustainability do not match.

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This contribution reviews the meaning of two concepts – city and sustainability – and discusses their incompatibility especially if we think in a specific group of citizens – those who are above 65 years old.

Since cities came into existence, they have managed to survive because societies have been able to withdraw from the ecosystem a vast amount of products at a much faster rate than they can be replaced due to scientific and technological advancements. The city implies accommodating a diversity of groups of people and activities in a very restricted space. Within the current paradigm of well being, the demands of the modern city go far beyond the acceptable boundaries of its ecological footprint, requiring substantial modifications to the biogeophysical structure. Therefore, unless our concept of city is radically changed, bringing these two ideas – city and sustainability - together will prove to be a difficult task, since one is anchored in profit rates and the other is based on respect for the rhythms of ecosystems. Moreover, the larger the city becomes, more citizens are deprived of contact with the environment, the more disdainful they are and the more they ignore the other elements of the ecosystem. The environment becomes increasingly hostile and man takes refuge, for longer periods of time, in artificial environments. The building that started as a protective shelter for a few hours at night or during a season of the year has become the only possible refuge for the 24 hours of the day.

Nevertheless, the urban way of life continues to be preferred by a growing number of people (United Nations Environment Programme, 2010). It is currently estimated that 3.3 billion people, 51% of the world's total population, are concentrated into around only 2.7% of the planets' total area. And when questioned about their option, the main reason put forward is the hope to achieve a better quality of life (Wolch, 2011).

At Porto, the citizens with more than 65 years belong to a group that started, in the middle of XX century, a huge movement from the periphery to the centre searching for the dream of a better life. For most of them the advantages of the city were achieved by choosing a place of residence in the city centre to save for instance the daily transport costs. Though, they live now in the oldest and more discomfort built area of down town. Their environment has the higher magnitude heat island effect, the smaller sky view factor, higher humidity, less green areas, greater slopes and worst direct sunlight exposures. The buildings in this part of Porto are inadequate envelopes to the typical seasonal thermal variability (Monteiro, 1991). As a vulnerable group, the aged ones have few mitigation measures at their fingertips to minimize either the outdoor and indoor climatological and pollution hazards.

The geographical health aggravation of persons over 65 years old, during extreme cold and warm events at Porto, illustrates the coincidence of countless environmental and socio economic inequities (Monteiro et al, 2011, 2012).

To survive and succeed in cities in a period of longer life expectancy it is essential to retrieve the notion of urban ecosystem and have in mind its multiple dependencies on the surrounding space as well as regain a new wellbeing paradigm. However, to change urban wellbeing paradigm and introduce sustainability into urban inclusive planning policies it is essential to find valuable tools to recuperate the ecosystem cohesion principle.

According to Boyden et al. (1981), the notion of quality of life and well-being varies across socioeconomic and cultural groups and according to the political and historical context. But in this second decade of the 21st century, well-being for an urban citizen still means: i) having the ability to survive and reproduce; ii) being able to spend their energy on several activities without becoming exhausted; iii) being able to improve and then maintain their position in society; and, iv) feeling emotionally well-balanced. Even though these factors are all considered as essential in the individual evaluation of well-being for most people today, the comparative weight of 65+ in urban populations show that the excessive importance given to the 3rd condition does not have the same significance and may help to explain the remarkable increase of in inaptitude of modern cities.

Keywords: Urbanization; sustainability; well-being paradigm; urban climate; age friendly

Local planning for an ageing population in the UK

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Abstract

The population of the United Kingdom is growing and ageing. Popular retirement destinations in coastal and rural areas are particularly challenged by high proportions of older people. The implications of these demographic shifts are cross-cutting; they extend from the provision of services to the design of housing and neighbourhoods. The central government has attributed prominence to the topic and has issued strategic guidance for local areas. As one example, this guidance promotes the concept of the "Lifetime Neighbourhood," an inclusive living environment for all generations.

How do local actors plan for population ageing? Qualitative research has been carried out in three case study areas to answer this question. A time frame which goes back to the first local strategic reactions to ageing in the respective area was observed hereby. The paper will add practical as well as analytical experiences to theme A "Urban Policies and Ageing." It sheds light onto the wealth of activities, including successes and difficulties, in the case study areas. Moreover, insights from the case studies have been generalized; as in a typology of actors. They will be put up for discussion at the conference, which will be especially interesting in relation to experiences form other areas.

The paper is based on research for a PhD[1]. The research was carried out in the context of a graduate school in Dresden, Germany, which aimed at a better understanding of strategies in response to demographic changes in different European countries. It builds on a wealth of German research experience with local and regional implications of and reactions to demographic shifts.

The research followed a multiple-case design. The case study areas North Tyneside, Poole and Wealden, are all characterized by above average proportions of older people but contrast regarding general conditions like location or administrative structure. The research data is drawn from qualitative interviews with experts in local authority administration, charities, etc. based on an interview guideline. Moreover, an analysis of documents such as older people strategies and minutes of meetings has been carried out. An analytical perspective on local governance and collective learning approaches are the main theoretical concepts the research builds on. The research design is oriented to grounded theory and aims at identifying themes and patterns in the research data by closely connecting data collection, data analysis and theoretical abstraction.

On the one hand, key results of the paper focus on local governance arrangements. Governance structures, especially as regards multi-organisational partnerships, have been experimented with for many years. On the other hand, the paper focuses on learning processes in planning for an ageing population. It analyses the different phases from setting the agenda for the topic of ageing and older people, followed by building up knowledge on the subject, collective learning, and, finally, strategy-making. A special focus is put on older people's participation. Different approaches have been tested in the UK - from elected councils to more informal older people's forums. The paper will close with a brief outlook to what other countries can learn from the investigation into British experiences in planning for an ageing population.

Keywords: Ageing, local area, case study, governance, learning

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1 Meyer, Christine (2011): Planning for an Ageing Population: Experiences from Local Areas in the United Kingdom. IÖR-Schriften 56/2011. Berlin: Rhombos, 259 S.

The implementation of the '*Urban Renewal Area – ARU*' in territories under aging.
The *ARU* of Oporto Historical Centre.

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Abstract

1)   The issue/research problem

The paper presents a diachronic analysis of the territorial instruments of intervention, between the *ACRRU* (*Urban Recovering Critical Area*) and the current *ARU* (*Urban Renewal Area*). The *ARU* focuses on the urban fabric, carrying on a set of problems, among which stands out the aging population, the building degradation and the social and economic decay.

2)   Its relevance for the conference theme

Thus these (new) instruments of public policy – the *ARU* – focuses the renewal of the historical areas of cities, the type of population that can directly benefit from these instruments are precisely the elderly.

3)   The background

Despite the identified weaknesses, these areas have several limitations, but also potentialities in the patrimony, culture and tourism fields, thereby contributing to their own identity. These potentialities should be recovered, safeguarded and enhanced, in conjunction with the systematic rehabilitation process.

4)   The methodology

The Decree-Law no. 307/2009 of October 23th, which establishes the RJRU (Legal Regime of Urban Renewal), introduces a new figure - the *ARU* - replacing the *ACRRU*. The diploma, by requiring the (re) conversion of the ACRRU in ARU, gives the opportunity to create new areas. From the analyses of the same diploma, one identifies a set of performance areas in which local authorities can act following multidisciplinary, multi-scale and multimode management logic of intervention which we intend to explore regarding the benefits for the population aging.

5)   The key results of the paper

Within these domains of activity it is important to highlight the opportunities for life quality, dignity appropriation over public space, security, accessibility and social integration, thus contributing to create more effective

conditions capable to promote and encourage the living of the population which has a the largest representation in these territories: the elderly. This constitutes the central point to be explored in this paper, together with the selected case study - the ARU of Oporto Historical Centre, the instrument itself, which highlight the general weaknesses pointed out to the ACRU, especially from the viewpoint of the potentialities, through its classification   as   World   Heritage   Patrimony**.**

Keywords: **Population aging; Oporto Historical Centre; Urban Renewal Area; Quality of Life.**

Political and Juridical analysis of specificity of the elderly in the Urban Rehabilitation in historical Centre of Oporto

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Abstract

"Western societies are confronted nowadays, with serious demographic problems, among which stands out due to the aging population, other factors, increased life expectancy and a sharp drop in fertility rates. For these trends have helped several transformations in social organization - changes in family structures, massive entry of women into the labor market, reduced marriage rate, prolongation of studies, and delayed marriage, among others. "(I. º report on the quality of life - Porto 2003:70)

The Urban Rehabilitation translates into the intervention of territories that presents weaknesses, certain limitations and some lack of competitiveness. These weaknesses and limitations go far beyond the limit of physical, but also covering the economic, demographic and social issues.

The demographic dynamics in the last decade, of countries in general and special historical centers, show an aging population.

Issues that concern aging are evident in a large number all across European policies, national and local, having nowadays its center point - the institution by the EU, of 2012 as "European year of active aging and Solidarity".

There has been a transformation of political and institutional models which foster a Europeanization of decision-making. These changes, contribute to a review of the role of the state and several stakeholders in several fields, triggering the emergence of new forms of governance and distinct processes.

Within the process of cultural and social transformation, European legislation has a function aggregating the lines of thought among member countries.
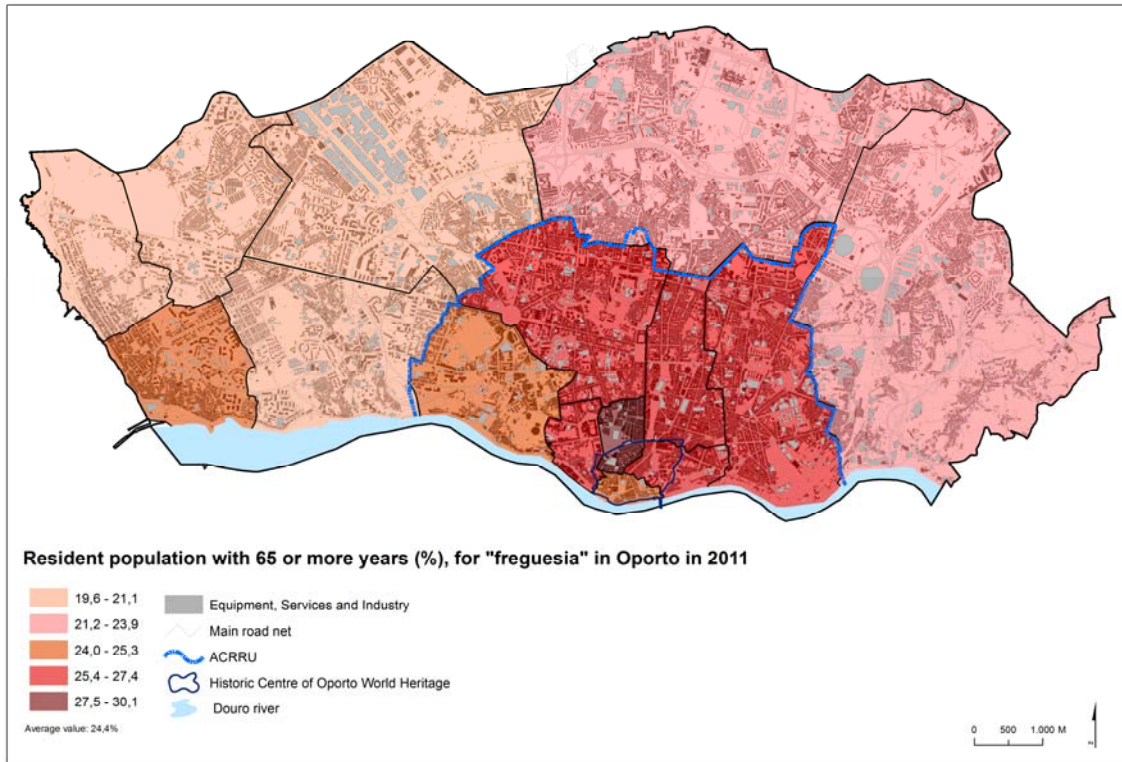
Whit this article, it is intended to make a dual analysis of the theme of aging population, in Urban Rehabilitation: these analyzes included a strategic and policy vision, as well as a legal and regulatory dimension.

In the political field, the methodology was based in documents of strategic Policies of Urban Rehabilitation, as well as Social Policies, directed to the life quality and the welfare of population.

In a Juridical approach, is intended to identify the importance that old people have in several diplomas that rule the Urban Rehabilitation. To this end, we will analyses the Juridical Regime of Urban Rehabilitation (the 307/2009 government decree of 23 de October); the Expropriation code (Law n. º 168/99, of 18 of September, updated to the Law 13/2002, of 19 of February), the new law of Urban renting (version of the proposal of the Law n.º 38/XII), as well as the regulation of programs of financial support with the specificity to elderly people (RECRIA; RECRIPH; SOLARH).
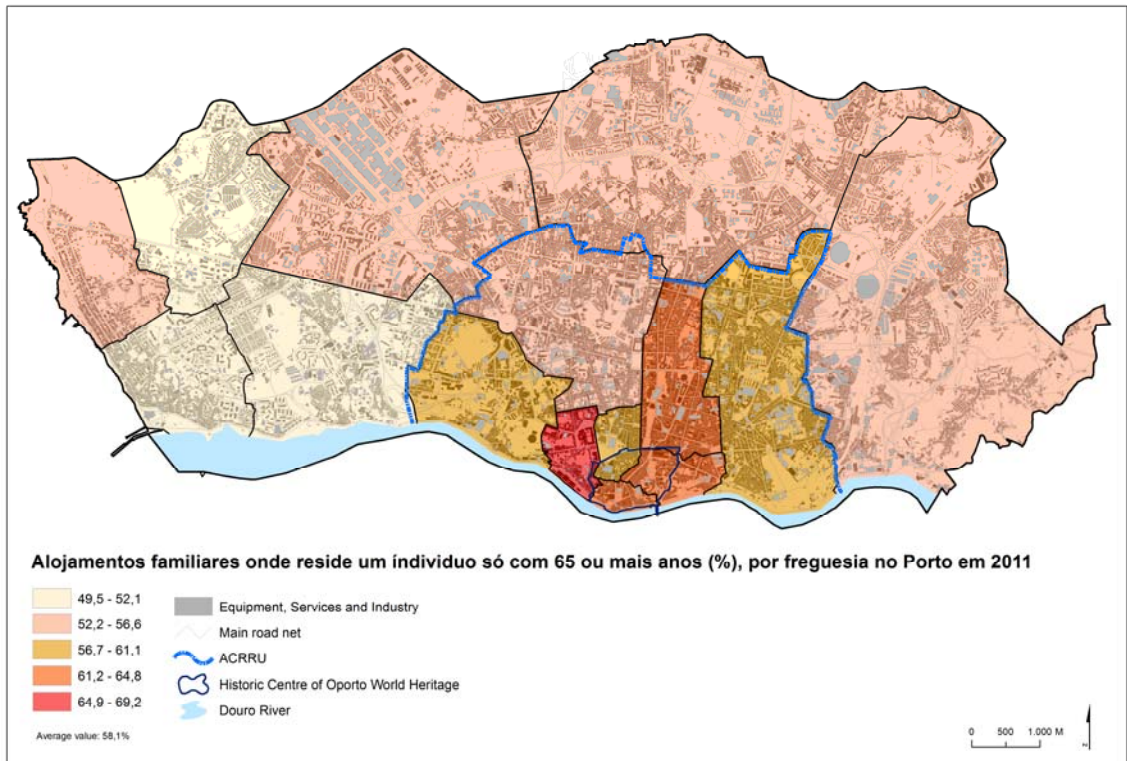
In a territorial analysis, is used a study area – the historic center of Oporto, this one, very aged and elderly with a high number to reside in their one (figure 1 and 2). The rehabilitation dynamics, includes an enlarge set of public and private actors, standing out the action of Porto Vivo, Urban Rehabilitation Society. Thus, it identifies the "good practice" in the field of action on the elderly, which are in the study area, evaluating the origin of these initiatives as well as the relation of causality of the existing legal instruments.

Figure 1: Resident Population whit 65 years aged or more (%) by civil parish in 2011

Resident population with 65 or more years (%), for "freguesia" in Oporto in 2011

19,6 - 21,1	Equipment, Services and Industry
21,2 - 23,9	Main road net
24,0 - 25,3	ACRRU
25,4 - 27,4	Historic Centre of Oporto World Heritage
27,5 - 30,1	Douro river

Average value: 24,4%

0   500   1.000 M

Source: INE 2011; CEGOT.UP

Figure 2: Family accommodation of usual residence, in which all residents have 65 or more age – with a person (%), by civil parish in 2011

Alojamentos familiares onde reside um índividuo só com 65 ou mais anos (%), por freguesia no Porto em 2011

49,5 - 52,1	Equipment, Services and Industry
52,2 - 56,6	Main road net
56,7 - 61,1	ACRRU
61,2 - 64,8	Historic Centre of Oporto World Heritage
64,9 - 69,2	Douro River

Average value: 58,1%

0   500   1.000 M

Source: INE 2011; CEGOT.UP

Moreover, attempts to complement this territorial analysis with an information system that portrays and characterizes the issue of aging, in order to understand if the actions of the older population are to meet the real needs and policy actions. For this use, will be consulted information available in Census 2011 (INE), at the civil parish level.

Whit this survey, intends to verify the concern of the legislature, with the specificity of old population, that concerns operations of Urban Rehabilitation, was well as consider if this specificity is evident in strategic options and operationalization of Urban Rehabilitation in the Historic center of Oporto.

In terms of social interventions in terms of urban regeneration there is the challenge in the existence of aging population structure and size of several families, families rather exclusively by the elderly, indicating the need for the creation and adaptation of services and equipment appropriate to the needs of residents.

Keywords: Urban Rehabilitation; Juridical Regime; Aging, Governance

Smart ageing in smart cities

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Keywords: Health policies, Equity, Aging, Urban health, City planning, Residence characteristics, Quality of life.

Consumer participation, Strategic planning, World Health Organization.

Research problem and background

The research here presented moves from the assumption that a city designed for ageing people, and in general for weak users – as women, children, disabled people – is a better city for all. As WHO states, "because active ageing is a lifelong process, an age-friendly city is not just "elderly-friendly". Barrier-free buildings and streets enhance the mobility and independence of people with disabilities, young as well as old. Secure neighborhoods allow children, younger women and older people to venture outside in confidence to participate in physically active leisure and in social activities."(WHO, 2007)

An essential condition for quality of life and well-being, as for a sustainable economic growth, is represented by health, considered as a primary right for every human being (WHO Constitution 1948).

European Union has then developed, starting from 2006, the Health in All Policies (HIAP) approach, which in Italy was taken in by CCM (National Centre for Disease Prevention and Control) in 2008 with a specific project "Gaining health: encouraging healthy choices" which was then turned into "Health in all Policies".

In this framework, SiTI contribution was focused on identifying the relationship between basic human needs (as moving, living in a certain environment, working, etc.) and the consequences they may have on health and lifestyles, as well as how policies can influence this relationship.

Considering the global setting of an increasing ageing population, which is progressively leaving urban areas for cities[1], it's important to bring to the attention the focus on elderly people as they will be the main city users of tomorrow.
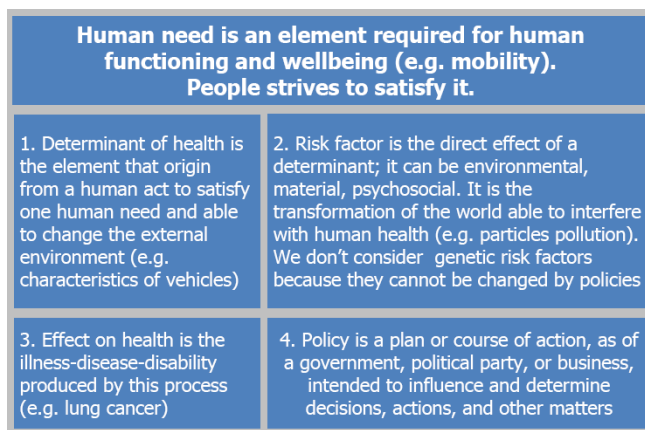
Older people play a significant role in communities - in paid or volunteering work, transmitting experience and knowledge, or helping their families. These contributions can only be ensured if older persons enjoy good health and if societies address their needs. Making cities and communities age-friendly is one of the most effective policy approaches for responding to demographic ageing, and an age-friendly city will be more friendly for each citizen.

a)   Methodology and key findings

Scientific knowledge and key results are meant to be transferred to three levels: citizens active in local urban planning, the technical decision makers and the relevant policy makers at executive and legislative levels, in order to increase awareness of all policies decision makers towards health and health equity, keeping in mind that a non-sanitary policy could have serious and recognizable effects on citizens' health. Starting from a human need, a causal chain has been set out and evidences on nexus have been collected.

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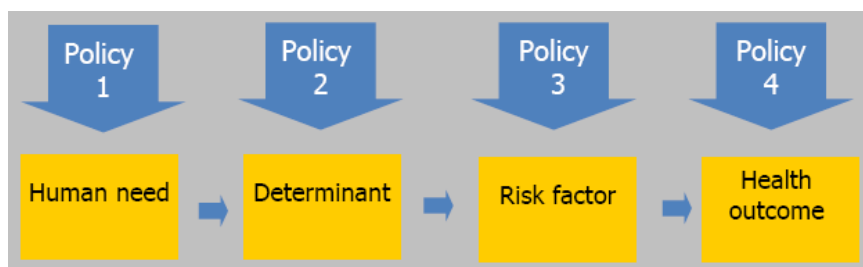
[1] In 2000, the global population of people aged 60 and over was 600 million; by 2025 there will be 1.2 billion and, by 2050, almost 2 billion. The proportion of the global population aged 60 will double from 11% in 2006 to 22% by 2050. In 2008, for the first time in history, the majority of the world's population lived in cities and by 2030; approximately 3 out of every 5 people will live in an urban area. (WHO)
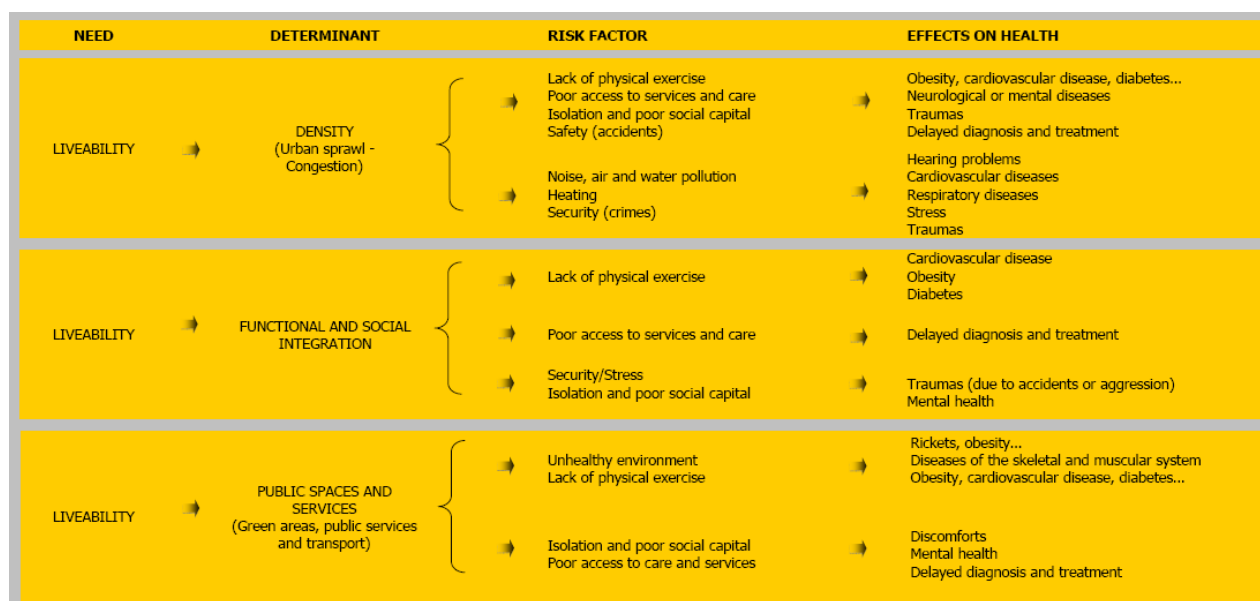
Human need is an element required for human functioning and wellbeing (e.g. mobility). People strives to satisfy it.	
1. Determinant of health is the element that origin from a human act to satisfy one human need and able to change the external environment (e.g. characteristics of vehicles)	2. Risk factor is the direct effect of a determinant; it can be environmental, material, psychosocial. It is the transformation of the world able to interfere with human health (e.g. particles pollution). We don't consider genetic risk factors because they cannot be changed by policies
3. Effect on health is the illness-disease-disability produced by this process (e.g. lung cancer)	4. Policy is a plan or course of action, as of a government, political party, or business, intended to influence and determine decisions, actions, and other matters

HiAP approach is based on:
1) Strong multidisciplinarity
2) Literature review
3) Experts opinion.

Within the Italian HiAP approach, one of the focus policy is urban planning and regeneration in relation to health, an interesting but scarcely investigated issue. Scientific literature until now has shown fable evidences on health impacts of urban regeneration investment, due to difficulties in finding and isolating health effects' impact data proving those links.

In particular, considering the built environment, the following causal chains were identified, starting from the need of "liveability".

NEED	DETERMINANT	RISK FACTOR	EFFECTS ON HEALTH
LIVEABILITY	DENSITY (Urban sprawl - Congestion)	Lack of physical exercise Poor access to services and care Isolation and poor social capital Safety (accidents)	Obesity, cardiovascular disease, diabetes... Neurological or mental diseases Traumas Delayed diagnosis and treatment
		Noise, air and water pollution Heating Security (crimes)	Hearing problems Cardiovascular diseases Respiratory diseases Stress Traumas
LIVEABILITY	FUNCTIONAL AND SOCIAL INTEGRATION	Lack of physical exercise	Cardiovascular disease Obesity Diabetes
		Poor access to services and care	Delayed diagnosis and treatment
		Security/Stress Isolation and poor social capital	Traumas (due to accidents or aggression) Mental health
LIVEABILITY	PUBLIC SPACES AND SERVICES (Green areas, public services and transport)	Unhealthy environment Lack of physical exercise	Rickets, obesity... Diseases of the skeletal and muscular system Obesity, cardiovascular disease, diabetes...
		Isolation and poor social capital Poor access to care and services	Discomforts Mental health Delayed diagnosis and treatment

The aim of this study, and the effect that it's trying to achieve, is to create an integrated approach based on joint actions, as a lot still has to be done in Europe: starting from the Healthy Cities network, with the knowledge of HIAP program, and the relevant programs about sustainable and smart cities, the aim will be to create a pleasant and more equal environment for all: acknowledging and respecting diversity should characterize social and service relationships no less than physical structures and materials.

b) HIAP for active ageing: relevance for conference themes

Active ageing depends on a variety of influences (determinants) that surround individuals. They include material conditions as well as social factors that affect individual types of behavior: HIAP has collected evidence on these determinants, considering that their effects on ageing people are more acute than on youngers.

Central to prolonging the independence of older people is enabling them to live in their own homes and neighborhood for as long as possible. Research on the design of home environments that maximize older

people's independence has led to innovations such as 'Smart Homes', but very little research has addressed the outdoor environments. If older people are to remain at home, they need to be able to continue to use the wider environment and to go outdoors, otherwise they will be effectively trapped inside.

Getting outdoors offers physical, sociological and psychological benefits for older people. Physical inactivity is a major underlying cause of disease and disability (WHO, 2003). Despite abundant scientific evidence, and multilevel strategies to promote an active lifestyle, the majority of older people are not sufficiently active to maintain good health: getting outdoors has been shown to be one of the best ways to keep active, and that's why it's of such importance to design supportive outdoors spaces. (Sugiyama and Ward Thompson, 2006).

Considering also the urban environment at larger scale, some indications about urban form outcrop from the research: a liveable community could be defined as "one that has affordable and appropriate housing, supportive community features and services, and adequate mobility options, which, together facilitate personal independence and the engagement of residents in civic and social life"[2] (AARP, 2007).

Large, dense cities, especially in the developed world, offer more mass transit facilities than rural areas. Older residents in rural and suburban areas must rely on cars to reach almost any destination, and if unable to drive, their mobility is severely limited. At the same time, cities offer more social and civic opportunities, such as entertainment, neighborhood and community organizations, and volunteer charities, which are all related to successful aging. Research has also shown that dense urban areas with mixed uses and good pedestrian sidewalks are associated with increased walking among older residents, allowing them to engage their communities and maintain their physical health. (Li et al., 2005, Patterson and Chapman, 2004).

Over the last few years, a model of urban management has gradually imposed itself, which is essentially founded on the possibility of citizens' participation in the most important decisions concerning the development of their own city. From general policies (strategic plans, programming plans, urban development model) to more specific problems (such as waste management, pollution reduction, the rearrangement of quarters) HiAP aims to transfer the scientific and technical knowledge into these processes, in order to achieve a more healthy and equity oriented community.

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[2] American Association of Retired Persons (AARP)

Communities of Assisted Living: the case of Home-Villages in Portugal

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Communities of Assisted Living with a special focus on the typology Home-Villages in Portugal are the theme of this work. It sets off by an analyse and characterize the selected case studies the Home-Villlages of São José de Alcalar (Portimão), Monte da Palhagueira (Faro) and São Martinho das Amoreiras (Odemira), in their macro and micro scale, it aims to identify the physical and spatial components of their housing units, their social facilities and their support services, and also identify the movements of their residents in the territory, through the analysis of mobility systems and relationships in the location map of the support facilities available in the territory.

In such away, the reading of the macro scale will identify the neighborly relations above the territory and the relative proximity to the central equipments, while the reading of the micro scale will analyze the specific parameters of the village, such as: the relation between the built and non-built areas, identifying their role within the organizational structure (housing typologies and services available). It also presents a characterization of the resident population (total of residents, differentiation by gender and by age and existent sing family relations).

From the interception of the obtained data it seeks to identify a structuring program line to develop a "model" to Home-Villages, as a system of housing and services geared to the needs of the elderly population. And also to identify their potential as a system of rehabilitation of the territory and of the architectural heritage, in villages and towns in the inland region of the country, as well as the process of their population and ageing. Where the implementation of structures like these could contribute to the sustainability and revitalization of the region site (creating jobs, which may allow the reestablishment of populations on site), and also leverage the local economic and tourism sector, aimed to the senior population.

In the future, global demographics will be marked by the increase of the number of individuals with sixty five and more years, resulting from the combination of two factors: the increase in life expectancy and declining birth rates. This phenomenon appears as a reflection of advances in medical, scientific and technological knowledge, and also of the improvement of hygiene and sanitary conditions in the interior of the houses and in the territory, resulting from the urbanization process, these changes contribute to the increase in average life expectancy of the population. It is still relevant to include educational, cultural, political, social and economic factors, which influence the fertility rates, and also the migration flows - where the immigration attenuates and the emigration promotes the ageing of the population.

In this context, the ageing of the population presents itself as a global problem, a reflection of globalization (HARPER, 2009), where concerns related to the specific needs of housing, from the typologies point of view, from the design, from the ergonomics, from the equipment's and social systems that support them and from the planning of the territory, are the result of demographic, social and economic changes.

To the demographic challenge, one may also add the challenge of promoting relations of proximity and interaction of the residents with their homes and with the territory, where they live and move. It is necessary to establish territorial and architectural structures that eliminate physical and psychological barriers between generations and minimizing the isolation, where the introduction of the time factor, in planning, aims to encourage and enhance the social and civic participation of the elderly population. Therefore, architectural and territorial planning, in future, should give answers to the specific needs of different layers of the population and should also be flexible to different stages of life, in order to promote a proper interaction between the physical space and the specific needs of their users.

The model of Home-Villages may be a promoter to the implementation of inclusive communities in an approach that takes care of the needs of the (elderly) population and takes advantage of the territory. Since the concept includes structures designed and built for this purpose or the resource of existing towns and villages in a depopulation process, where they provide all necessary services, which may diversify according to the specific needs of the population and of the territory where they are inserted. These can be a preferential space for the installation of housing and support services for ageing population (local, national and foreign) to improve their quality of life and simultaneously promote the setting of population, creating jobs in specialized areas like geriatrics, long-term care, among others, and like this promote their intergenerational component.

The relevance of this research relates to the actuality of the theme and the need to create operational responses, in order to advance knowledge, in the areas of architectural and territory planning, which despite prior accessibility and mobility concerns specific to elderly population, now pretends to be intergeracional.

Keywords: Home-Villages; Territory; Housing; Aging; Revitalization

Spatial Paradigms for Inclusionary Housing:

Towards the Non-Institutionalization of the Elderly

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Abstract
Due to the rapid development of technology, the new - innovative technologies in the medical field and contemporary anti-aging prevention techniques, people's average life span has greatly increased. Consequently, there have been reports in recent years affirming that "Europe is getting older." In Cyprus as well, a considerable decrease in the birth rate and an increase in life expectancy gradually means that older people will constitute a large section of society. It is expected that in the next 10 years people over the age of 65 will reach 20% of the general population. In other words, one in five Cypriots will be over 65 years.

Consequently, issues such as provision of the most appropriate forms of housing for this section of the population as well as choice are gaining significance. Recent research suggests that as the number of elderly people increases, we are faced with changing aspirations, which place particular importance on issues of privacy, autonomy and independence (Hanson 2001). There is a significant move away from institutional care provision to one that focuses on the concept of domesticity and the individual. These changing aspirations seem to affect the way future housing models are developed.

Recent studies in Cyprus have indeed shown that only 3.8% of elderly people are currently living in seniors' residences of an institutional nature. It is therefore challenging to conduct in depth studies of the living conditions surrounding this segment of society and to highlight the challenges they face in maintaining their autonomy and in being housed in appropriate living quarters. Architectural and Urban designers are hard pressed to propose alternatives for housing that anticipate the needs and changing aspirations of this sector of the population.

This paper's aim is twofold: first, it sets out to map and analyze how current provisions of housing for the elderly in Cyprus, seek to move away from an institutional model of care. It attempts to explore through an in-depth analysis, which factors may have an effect to the extent to which an environment might feel domestic or institutional (such as privacy, independence, control) and the relation to spatial layouts. Secondly, based on the preceding analysis and findings, the paper moves on to propose a spatial configuration of elderly housing which according to the authors provides a domestic setting focusing on the individual.

In the proposed paper the author attempts to make a diagnosis of areas of habitation that exhibit high concentrations of elderly people in the target area of the Larnaca metropolitan region. As a result of this process the author has attempted to map this population's lifestyle, their habits, their culture, their occupations and above all their quality of life. Data and information collection consists of on-the-spot visits and surveys, spatial observation and documentation and interviews and meetings with the various stakeholders. Out of the various sites surveyed, two contrasting areas were selected: the traditional historic core of the village of Aradippou and the refugee settlement of Ayii Anargiri.

In the case of the elderly population at Ayii Anargiri they are all refugees dating from the Turkish invasion of Cyprus in 1974, displaced from different regions in the occupied areas. The areas they had to vacate were filled with their life experiences and despite a considerable length of time since their displacement has passed, they are still trying to come to terms and to become integrated in an environment where their social networks needed to be rebuilt not only amongst those people in the settlement coming from their own village but also those coming from other villages as well. To this day many feel that their residence in the refugee settlement is temporary and they live with the hope that they will eventually return to their villages.

One of the first things to strike the casual observer is that here too the settlement and the people in it are aging. The elderly people's daily life, residing in the settlement, is inextricably linked to services that the state provides for the elderly people's socialization and these are known as Open Care Community Centers (KAPI). Even though these centers are intended to be operated as venues for leisure and education as well as places where the elderly may receive medical attention, physical therapy, laundry services and last but not least meals, nonetheless they are mostly perceived as a simple coffee shop.

In the case of the traditional core of the village of Aradippou, the daily life of the elderly – especially for those having reached retirement age and still in good physical shape – is characterized by an intense and unselfish effort of assist in servicing the daily needs of the families of their children and grandchildren. For the majority,

having spent their entire lives in this village, they are filled with intense and localized life experiences are not troubled by the insecurities and misgivings of a temporary existence that characterizes the counterparts who had to move from their ancestral places. This is the case where the elderly want to be near the land that they grew up in and in close proximity to the residences of their children. Their hope in all cases examined is that their children will be able to care for them when they will not be able to mind for themselves.

In the study of the village of Aradippou, particular attention was paid to the social networks as they were manifested in and around the village square, which has been their traditional meeting point and the place where that they spend most hours of the day. Other points of interest examined were a sampling of selected homes housing elderly residents, the elderly nursing home that operates in the village and the town hall itself and its staff which manages the activities and programs that are offered by the municipality for the elderly. Further data collection and analysis resulted from questionnaires that were intended for three groups of stakeholders: the elderly, their children and grandchildren and for the caregivers, provided to the elderly people either privately, in the majority of cases or state funded in selected situations.

According to the data gathered, the results from the interviews and the observations and documentation of the physical spaces of the facilities and homes that house this segment of the population, an initial diagnosis has been reached. Namely that the elderly population and their needs and aspirations as typified by these two Larnaca region case studies is at a crossroads where their options with regards to housing and the autonomy retained therein are at a point of transition as different alternatives are on offer or are in the process of development. One important consideration that has to be taken into account is the fact that the elderly, just like children, are a very vulnerable group, in need of assistance and additional support as they get on in years and their physical and mental condition is deteriorating. Unfortunately today, a new social model is in effect whereby the children and grandchildren of the elderly population are not often in a position to care for them and to provide the assistance that they require.

Thus, the aim of this proposal is to present a design framework that though specific to a location, that of the case study, nonetheless typifies the issues faced by the architects and planners called to address issue of housing and socialization networks of an elderly population in Cyprus. The aim is to create spaces and facilities that run contrary to the idea of the institutionalization of the elderly population and which at their core have as a goal the preservation of independence and autonomy of the individual. At the same time another goal is the incorporation of this segment of the population into a framework of continued production and usefulness whereby the elderly will be able to make a contribution to their own existence and that of their fellow inhabitants by leading creative and productive lives.

The design stage of the investigation proposes a new neighborhood at the heart of the village of Aradippou, where existing and proposed buildings create collective spaces suitable for people of all ages and backgrounds to coexist, while it gives the elderly the opportunity to reserve an individual place of residence and to provide them with social welfare services, which are not widely available. This occurs in residential quarters that provide accessible places for all and conditions that allow for the appropriation and the exploitation of space by the tenants. The particular neighborhood could, in a future stage, be used as a model for other neighborhoods and be developed in such a way that it would preserve the relationship between the elderly and the rest of the population, while providing them with the flexibility to lead a more sociable yet autonomous existence in an environment that will enhance and consolidate their collectivity and their direct interaction with people of all ages and backgrounds.

Keywords: inclusionary planning; non-institutionalization; autonomy; aging population.

Ageing Spatial Patterns: trends from Oporto's metropolitan region

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Abstract

This paper aims to shed light on the spatial patterns of ageing populations from the last two decades. Are there specific spatial concentrations of ageing populations? Is the whole metropolitan region ageing the same way? Are these patterns persistent through time? Do ageing populations share the same characteristics? The answers to these questions are essential in shaping urban policies today. Policy-makers must fully understand the scope and depths of ageing spatial patterns in order to intervene adequately and transparently.

However, pattern analysis to this end has traditionally relied on eyeball consideration of cartographic evidence. Despite its popularity, these methods are vulnerable to subjective interpretation of what constitutes a statistically relevant cluster. Our proposal is to integrate traditional cartographical analysis with local indicators of spatial autocorrelation – LISA (Anselin, Sridharan, and Gholston 2007). LISA permits to consider the degree of likeness, both in high and low values of a variable, between one spatial unit and its neighbours, and to what extent it is statistically significant. In this way, we propose to complement traditional pattern analysis with a systematic method of identifying significant clusters. This approach works side by side with the analysis of choropleth maps of static pictures of the ageing reality on the periods observed and of a dynamic illustration of its variation rates.

Our case-study focus on the evolution of the ageing index in Oporto's metropolitan region from 1991 to 2011, at the scale of the parish. There are mainly three municipalities affected by ageing populations – Oporto, Fafe and Arouca – from which one of them belongs to the most populated area – Oporto. Data from 1991 and 2001 suggests the ageing population is well confined to these three municipalities, whereas in 2011 the metropolitan region has become fragmented, diffused and generally affected by high values of the ageing index. A closer look to the 1991-2011 variation rates also points to spatially random increases in 2011. However, spatial autocorrelation analysis rejects the random pattern hypothesis in the three periods observed. In fact, clusters of highly ageing parishes are relatively constant throughout the two decades, roughly coincident with the municipalities of Oporto, Fafe, Arouca and the centre of Guimarães. While these clusters remained distinctively the most affected by ageing, we can observe evidence of minor changes in the patterns of the remaining region. Namely, the analysis indicates the obliteration of clusters of low ageing values between 1991 and 2001 and the emergence of secondary clusters of high values along the coast, between 2001 and 2011. We then proceeded to characterize each cluster (with attributes such as population, housing and household structure) and found that the ageing process affects not only different spaces, but also different people.

We believe our approach leads to a more systematic and clear characterization of the ageing spatial patterns and the trends they follow. By applying it to Oporto's metropolitan region, we hope to contribute to better evidence-based urban polices for one of the major challenges of the contemporary city.

Keywords: ageing, patterns, Oporto, spatial dependence, metropolitan region, time

Towards Meaningful and Practical Food-Related Support Systems for the Elderly: initial research findings from the FOOD project - Framework for Optimizing the process of FeeDing

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Abstract

We present here research and user-studies on the elderly and their experiences of food: the access, experience and meaningfulness of food in their lives. This research is part of a pan-European Ambient Assisted Living (AAL) project entitled FOOD, with partners: Indesit, Consiglio Nazionale delle Ricerche CNR, Università degli Studi di Parma, Associazione Nazionale Mutilati ed Invalidi del Lavoro (Italy); Brainport Development (The Netherlands); Department Of Social Services, Local Council Brasov (Romania); International Business School, Jönköping University (Sweden); Copenhagen Institute of Interaction Design (Denmark). The FOOD project aims to develop new food related services and appliances that could support the elderly in keeping them self-sufficient and independent in their home for a longer periods of time, later into life. As is intended with a number of related projects, the goal is to forgo or delay more 'radical' and economically burdensome decisions needing to be made by families or institutions, such as moving the elderly to an old-age home, or health care institutions. Food and eating are, of course, a salient and fruitful application area for the detection of personal limits and stresses to social networks and families.

The project aims to develop a new kitchen environment that supports the autonomasy and independence of elderly in their own home. Starting from an internet enabled kitchen, the project investigates new ways to provide elderly with efficient and meaningful services around food, which allows them to access the "self-serve" society from their home. The project articulates through a period of field research with elderly and an investigation of their support network; concepts generation for new product and services; services implementation and prototypes building; running pilots in the homes of elderly to test the services and the prototypes,and marketing of the final solution.

This working paper summarizes the results of the first stages of the project, where field research with 11 respondents (elderly individuals and couples) was undertaken. It will serve to share our findings, the user-study and reporting formats and methods we developed for the research, and a brief evaluation of the methodologies and their effectiveness.

The FOOD project began in October 2011, with extensive field research with elderly, individuals and couples, in Italy, The Netherlands, and Romania over February, 2012. The aim of the research was to meet elderly in their own context (their home, neighborhood, and city) and through direct observation and interaction gain insights on the process of aging, and more specifically their perspectives on food, preparation, eating, shopping, cooking and social aspects of food. What motivates elderly to cook and eat? What role does food play in relation to health and physical and mental activities?

In our field research we derived methods from design- ethnography, such as interview and observation techniques, and support these methods with design probes and thinking.

We visited elderly couples and individuals at their home, shadowed them in their daily activities in the house and in the neighborhood and talked-through their daily activities and routines. Each field research session began with a semi-structured interview, aiming to gain a holistic overview of the everyday life of the elderly in question. For the interview, a formatted itinerary was prepared, moving from general to specific questioning, allowing us to create an informal chat in a relaxing and comfortable atmosphere, but still gaining information about specific topics: biography of the interviewed elderly; the family; the neighborhood; a day in the life; a week in the life; a year in the life; shopping; preparing meals and eating; and the kitchen environment. As well, we prepared some tools, derived from design-probe techniques, to use with the elderly in order to prompt the discussion and to delve deeper into emotional, social and personal experiences. Some of the tools developed were: an agenda of the day; cards with pictures of food and social situations centering on food; a seasonal calendar to fill out with eating habits related to seasonal changes; and pictures taken during our visit that we would share and discuss with the elderly before saying good bye.

Multimedia for all sessions, distilled, edited and appropriately transcribed to deliver an informed story of each elderly home we visited has been prepared and will form part of the paper presented. Together with the documentation multimedia, the outcome of this research is a collection of insights on aging and on food that leads to new opportunity areas for aging to design for project partners and the research community more widely. The FOOD consortium will gather at the end of March 2012 and it will run a series of brainstorm sessions from the insights and opportunity areas discovered in order to generate new concepts for services around food and

elderly. The project will build prototypes of selected concepts (products and services), which will be tested in a number of pilots in Italy, The Netherlands, and Romania starting in September 2012.
We believe that our works, which have been documented in ways that make them easy to share and communicate, can be a starting point for other projects around elderly and their experience inside/outside home. While much quantitative research has been done within this field, there is less qualitative research and an urgent need for a better understanding of the everyday life of elderly and what it "means" to get old. This is the reason why we would like to contribute to the Session D - New Paradigms for Ageing Cities and we hope
to take part to CITTA conference presenting our field research on elderly and food.

PROJECT LINK:
http://ciid.dk/research/casestudy/assisted-living-solutions-for-the-**elderly/**

Keywords: elderly, food, ambient assistive living, field work, user centered research, etnography,

design research, services.

Ageing and urban environments: addressing older people's perceptions

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Abstract

Demographic change is increasingly becoming a central issue in most developed counties, generally considered by a double ageing effect: the combination of a permanent decrease in births rates with an increase in the average life expectancy. Albeit global, this phenomenon also engenders impacts at more micro scale territories, with different types of areas (urban vs. rural) displaying considerable variations. In what concerns rural areas, this has been a subject of debate for quite a while both in political and academic arenas, being overall acknowledged that these areas show different patterns and a less number of services when compared to the urban ones, as well as weaker economic drivers, which in turn lead to a minor capacity to attract and maintain active and qualified population. However, the ageing phenomenon in urban areas has recently gained some prominence in debate as well: firstly, because cities are being increasingly considered by academics and politicians central to economic development, supporting knowledge-based firms and attracting waves of qualified populations, hence providing opportunities for innovations suitable for different age and income groups; secondly, due to the exodus of the younger population from city centre (where the land price is extremely high) to suburban areas, in search for a better quality of life and more pleasant houses or places to live, the share of the population aged 65 and over has faced a considerable change; finally, because urban contexts apprehend a wide range of older populations characteristics, including those who are active with strong social networks and, on the opposite side, those who are highly marginalised and experience loneliness and poverty.
Literature relating ageing with the urban environment as also evolved from portraying older people as a social problem to consider them important social agents, hence the increasing interest in creating 'age-friendly communities', generally perceived as places where older persons are socially valued and supported with services and infrastructures that respond to their needs. In fact, several initiatives have been launched around this idea: the WHO Global Age-Friendly Cities project is a good example. What is scarcely explored in debate and in decision making policies is the older people's voice, their understandings of how and why the urban environment can influence their quality of life.

Based on a questionnaire survey, applied in the urban and suburban area of the city of Aveiro, Portugal, this article seeks both to widen the debate on this subject and to issue a challenge to policy makers concerning the ageing phenomenon. More specifically, the article explores the behaviour of different socio-economic groups, focusing on people with more than 65 years old, in terms of preferences for different urban environments, reflecting the 'willingness-to pay' for living in a place with certain characteristics. Data for this study are part of a broader research project, involving a multidisciplinary team, which aimed at quantifying costs and benefits of different forms of occupation (dispersed vs. compact growth of urban areas). Six different categories of attributes were considered to describe the neighbourhood: i) level of urbanisation (completely urbanised vs. predominantly agro-forestry); ii) level of accessibility to services and local commerce (less vs. more than 10 minutes' walk); iii) type of uses (peaceful and exclusively residential vs. busy with mixture of functions); iv) type of urban morphology (classic characterised by continuous buildings vs. modernist characterised by buildings separated from each other); v) type of backyard (individual vs. collective); and vi) typology of the building (single houses vs. collective housings). Overall, the questionnaire was applied to 432 respondents, stratified by the three different categories representing jobs, qualifications and age groups. For the purpose of this article, the questionnaire is analysed emphasising the answers of those with more than 65 years old.

Preliminary results interestingly show that the elderly tend to value more urbanised contexts (in contrast with more quiet places) when compared to other age groups, somehow challenging outdated perceptions about later life. From a public policy perspective, this clearly indicates that older people's voice must be increasingly and clearly taken into consideration in decision making processes regarding urban environments, hence the need to bring about a more effective dialogue about developing communities more age-friendly. The findings of this analysis are to some degree context specific, which is typical of a case study analysis. It is suggested that further research is needed in other urban environments to explore more fully the issue at stake.

Keywords: Demographic change, quality of life, revealed preferences

An evaluation of age-related outdoor thermal comfort — a contribution for bioclimatic urban design

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Abstract

Contemporary urban rehabilitation is particularly aimed at promoting more pedestrian-focused public spaces. The improvement of the outdoor thermal environment is crucial to ensure the success of these actions, when considering summer thermal conditions in Temperate Climates. Thermal comfort plays a crucial role because, faced with climate change scenarios, it is not enough to pedestrianise public spaces; the urban planner must also guarantee that people will tolerate thermal conditions, which are likely to become more extreme.

The ability for an individual to cope with such conditions is determined by a large number of variables which interfere with the definition of thermal comfort. It is widely discussed that thermal comfort is not only a sequence of physiological reactions of an organism under exposure to a given thermal environment but also, and to a greater extent, a subjective issue.

Age plays one of the most important roles in determining an individual's thermal comfort as it stands between the physiological and the psychological factors of thermal comfort. Different needs exist between different age groups. Though it is impossible to anticipate the needs of all users, it is possible to combine such differences and minimize the discomfort felt by individuals of each age group. The key is to provide adaptive opportunities through a carefully planned urban design strategy to suit all age groups. Bioclimatic urban design can provide quite an effective answer here.

This paper presents a field survey undertaken in Porto, Portugal, aimed at characterizing two urban public spaces from a morphologic, functional and social perspective, bearing in mind the provision of adaptive opportunities. A questionnaire and observations have been undertaken. Data collected was further related to the paving materials and vegetation level in both spaces in order to understand the extent to which thermal comfort in all ages relates to these two morphologic parameters at site. The main user groups are defined. The way in which the thermal environment of both spaces is perceived by different age groups is considered.

The first outcome of this study was that one space, a square, was considered to be very uncomfortable due to the excess of granite as paving material and the absence of shading trees, whereas the other space, a garden, was considered to be very pleasant. Still, a significant percentage of interviewees at the latter space considered it not absolutely comfortable. This percentage corresponds to the percentage of people above fifty years of age. Secondly, 'exceptions to the rule' introduced by personal parameter such as age determine that analysing and improving the thermal comfort conditions of a space requires a careful evaluation of the type of users. Thirdly, the more balanced the thermal performance of public spaces and the more adaptive opportunities are provided by the space's layout, the more pleasant the site will seem to users and the easier it will be to tolerate its thermal conditions. The final outcome was that though it may be difficult to predict accurately what the impact of a given improvement proposal will be on the local microclimate and on people's thermal sensation and comfort, a methodology of analysis encompassing all functional, morphologic, social, and microclimatic factors shaping a public space can help minimising the risks of an intervention to fail in its social dimension.

Keywords: urban heat island, bioclimatic urban design, urban rehabilitation, thermal comfort

Study of the outdoor thermal comfort in the urban areas of Madrid

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Abstract

One of the indicators for assessing sustainability in neighbourhoods is the environmental quality of open spaces. The studies revealed that the environmental condition imposed to the users of open space is directly related on the use of them, so improving the urban microclima it is possible to increase use of outdoor space to revitalise cities. Modelling the energy balance of a space will allow the evaluation of the thermal comfort, which will be conditioned by the actual physical environment and the presence of vegetal elements.

Unlike what happens indoors, for the application in outdoor urban spaces, the steady state models of thermal comfort (Fanger) tend to overestimate the sensation of discomfort. Nowadays there is no one internationally recognized model that can describe the condition of thermal comfort in outdoor spaces and available for different types of applications, such as urban planning, climate therapy, warning systems, information for tourists, etc.

With this objective the Universal Thermal Climate Index (UTCI) was born, it was developed from the research activities of the action COST 730, based in the physiological model Fiala. At the same time, in the RUROS research project, the parameter used was Actual Sensation Vote (AVS), which has been defined for the evaluation of thermal sensation in the design of urban areas. The research work presented consists in comparing the values obtained from the two indices of comfort, the UTCI and AVS, applying to a case study in Madrid.

The case study is located in a suburban residential neighborhood of Moratalaz in the south-east of the city, in an expansion area of the seventies made according to the principles of rationalist architecture. The climatic values were estimated using the simulation program ENVImet, software created for three-dimensional modelling of the urban microclimate. The area selected has been simulated in the two conditions: in winter (2010 December 21th) and summer (2011 August 15th) and the comfort value in the different point has been calculated. The determination of the climatic parameters needed to calculate the comfort index has been achieved through the use of the 3D simulation tool ENVImet. Six different stations have been identified in the study area, and for each one, the values of thermal comfort are chosen for a day in summer and winter conditions, and the time lapses have been determined from 9:00 a.m. to 9:00 p.m.

The results obtained in the summer, show that the central hours of the day produce a state of heat stress, and the conditions of comfort is achieved just during the early in the morning and late afternoon. This condition is not uniform over the whole area of study. In fact, significant differences between the areas with trees and the areas without any protection could be appreciated. Between the two parameters analysed, the results obtained by the AVS are homogeneous while the UTCI shows a more wide response spectrum. As regards the evaluation of the comfort degree in winter conditions, the results obtained by the two indices analysed are similar. A condition of thermal comfort is maintained during most of the day.

The analysis of mean temperatures of the climate of Madrid, shows that the summer season is one where it produces more discomfort. So, for check the model and to compare the results, we introduce the physiologic index of the sweating rate, adopted as a parameter for the comfort to validate the ambient conditioning of Seville Expo 92 in the summer condition. The sweating rate is a physiological parameter that expressed the thermal stress as a function of temperature and Relative humidity. This system is widely used for the design of spaces where overheating is the main problem.

The objective has been to obtain values and compare them, establishing the most suitable applicable index for urban design in the Madrid weather conditions. The work is a preview of a doctoral study conducted by the author, on microclimate and energy improvement of built spaces through urban regeneration projects.

Keywords: Outdoor comfort, Thermal urban design, Microclimate, urban comfort

QUALITY OF PUBLIC SPACES AND ITS IMPACT ON HEALTH: - an evaluation of two neighbourhoods: - Olivais Norte and Parque das Nações

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Abstract

Public spaces, especially green spaces, should boast of holistic, comfortable and safe aspects so that the people can enjoy an environment that promotes a sense of well-being. These should be designed to focus on the interaction of environmental and social factors for the promotion of healthy and active ageing in urban settings, since ageing population is increasing.
The design of these spaces should be carefully planned so that they are experienced and appreciated for generations and where they can socialize and find them attractive to enjoy; i.e., they can survive the time, the evolution of urban life styles and rythms.
If public spaces are not well designed and so not age-friendly living environment, the elderly will not find incentives for the enjoyment of public space; they become even more isolated and more vulnerable as their physical and mind health may deteriorate. To better respond to physical and psychological needs of this aged population, they should embody spaces of permanence that promote fellowship and social relations, should be well preserved and well lighted and have appropriate urban furniture; they must ensure a good mobility through tenuous and comfortable gaps, as well as, an adequate continuity, legibility and permeability of the different urban spaces; they should encourage people to leave their homes and enjoy the space that surrounds them, to do so, must also have appropriate size and ajusted to their functions, and shall ensure a good articulation and complementarity between them. The design of friendly living environments is a paramount importance as it plays a fundamental role in strengthening the urban social fabric;

This study aims to demonstrate how urban design can contribute for a balanced transformation and regeneration of public spaces taking into consideration the continuity of transformation and development of the city.
The research was based on a survey that was set up to assess the degree of people's satisfaction related to the public space which they live in, and how they relate to it.
A number of different Lisbon areas were evaluated and assessed, and the Olivais Norte and Parque das Nacões neighbourhoods were the ones that illustrated the strongest differences; they are both the result of urbanization plans which were urban proposals detailed and carefully designed in accordance with the urban rules of the time.
Olivais Norte emerged in the late 50s in response to poor conditions and lack of housing; whereas the built of Parque das Nações stemmed from the objective of accommodating The Expo'98; this was a project of colossal proportions in urban regeneration and re-development of an important riverfront which was used to be the city dockland area and then in a derelict and obsolete state.
In Olivais Norte the elderly population is much higher than in Parque das Nações. And while in the first neighbourhood are more afraid and reluctant to interact, they feel a lack of belonging to an environment which they can not relate to. Over the course of several visits to it their public places look empty and this proves that they do not promote or foster integration and inclusion which causes the elderly to isolate themselves.
Instead, the Parque das Nações' population is young, nevertheless attracting older generations to share the public spaces in the area and interact in a pleasant and safe environment. The older people stated that,despite their health problems, mobility was sometimes fragile, they felt encouraged to walk as it has comfortable floors and is well maintained; they also considered this area very readable, continuous and friendly environment; thus, people interact voluntarily and in an open cross-checking they told that they felt quite happy and safe where they felt no fear.
The startling contrast of the results between these two urban environments reveals that the urban spaces and the impoverished environment at Olivais Norte doesn't promote well-being and doesn't encourage interaction. However at Parque das Nações the environment is enriching and stimulating to all.
As our country boasts very pleasant climatic conditions, our public spaces, especially the green areas, should attract all age groups and have the adequate conditions for contributing to a strengthening of intergenerational

Promoting ageing in place in Portugal: constrains and challenges

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Abstract

World Health Organization is guiding the efforts to promote the well being of elderly and considers that optimizing opportunities for health, participation and security are the three pillars of active ageing.
Other factors such as environmental adaptation (urban or rural) and housing conditions have influence on quality of life and on psychological and physical wellbeing.
On the scope of active ageing we explore the importance of remaining in a self-determined home environment.
Aging in place means an interdisciplinary approach to creating options that facilitate remaining in a self-determine environment. This interdisciplinary approach emphasizes ageing and environment interaction and includes the fields of architecture, planning, interior design, sociology, environmental gerontology and environmental psychology among others.
The purpose of the paper is to identify the benefits in promoting actions in the context of ageing in place and to explore constrains and challenges on the scope of Portuguese reality.
These tasks were carried out through literature review and Portuguese surveys.

Some studies have found associations of ageing with attachment to place. As people age, an appropriate housing and surrounding conditions are particularly important for their quality of life.
Recent studies in Portugal suggested as in other countries that old people prefers to remain in the same home or same environment. But national surveys shows there are an increasing trend for older people to live alone and a prevalence of loneliness. The increase of population ageing and the transition from extended families to nuclear families contributes to increase the risk of isolation.
The low economic level and the impossibility of works of repair and functional adaptation force them to live in unsafe and unsecure environments. It gets more difficult to perform the activities of daily living and to keep engaged in physical, social and productive activities.

Ageing in place requires the preventative action of forethought and planning and should provide the appropriate tools to keep individuals in self-determined environments.
   Improving housing and urban conditions to create an accessible, safe and confortable environment is key in promoting ageing in place; it provides autonomy to seek out and encourages the participation in activities leading to an active social life.
   Moreover, ageing in place appears to be the most cost-effective model for aging. In fact, the lack of accessibility and low housing and living conditions has direct costs to old residents because it increases health risks and reduces the performance in the activities of daily living. It also has direct costs to community and government because it increases the possibility of daily care assistance, premature relocation to an institutional facility and extra costs with hospital assistance.

   An analysis of the literature was conducted to address the following research questions:
   • Which are the benefits of remaining in a self-determined home environment while ageing?
   • Which are the main constrains in implementing some actions of ageing in place in Portugal?
   Some surveys provides essential information of the population ageing in Portugal, identifying the main economic and social characteristics, with special emphasis in poverty, vulnerability to social exclusion and living conditions. In addition, reference sections of articles meeting inclusion criteria were searched to identify additional information.

   In conclusion we address the importance of complementary actions for implementing the ageing in place concept. Those actions would enhance their opportunities for health, participation and security the main goals of active ageing.

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relationships; as well as, to enhance a better social inclusion and thus a solid medium and long-term solution for better and stronger communities.

Keywords: public urban spaces, safety, health, intergenerational relationships.

Designing a new planning approach

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This paper draws on the EVIDENCE research project ('Re-inventing analysis, design and decision support systems for planning'), a 3-year project funded by the National Foundation for Science and Technology/FCT that is being developed in the Research Centre for Territory Transports and Environment/CITTA.

A number of weaknesses have been identified in the dominant planning paradigm of the last decades. As a reaction, an evidence-based planning and a performance-based regulation have been steadily establishing since the end of the 1990s, particularly in the UK. The first of these approaches introduces, in the debate, a new perspective on the relationships between evidence and decision making, evidence and action, on the utilization and on the role of analysis and research, and finally, on the spatial dimension of planning. Bearing in mind the negative aspects of extreme forms of regulation and of deregulation, the second approach proposes a new type of regulation based on the achievement of fundamental objectives defined throughout the planning process.

These two approaches, theoretically and methodologically linked, have an obvious need for monitoring and evaluation of the cyclical planning activity. While in an initial stage, in the emergence of the rational paradigm, planning evaluation focused exclusively in the plan making stage, the recent proposals in this field of knowledge have been focusing on the planning process and development control, and on the results produced on territories and societies, enabling, as such, the design of evaluation methodologies with an effective cyclical dimension.

Based on the current scientific debate, on the Portuguese planning system, and on the results achieved by the latter on our cities and communities, the EVIDENCE research project proposes the definition of a view, a methodology, and a set of techniques of analysis and planning. This ambitious goal is supported on previous work developed in CITTA: the structuring of the Plan-Process-Results/PPR evaluation methodology (Oliveira, 2011) and the definition of one of the techniques for analysis, design and decision support – the Structural Accessibility Layer/SAL (Silva and Pinho, 2011). In addition to SAL, this research project proposes another planning support tool, focused on the evaluation of urban form – Morpho (Oliveira, 2012). The development of EVIDENCE involves, besides the 'usual' tasks of a research project, the realization of a set or workshops in close collaboration with the professionals of the planning departments of two local authorities, Lisbon and Oporto.

The EVIDENCE project has five fundamental objectives. The first objective is the establishment of a sound linkage between an evidence-based planning and a performance-based regulation (with a clear focus on the planning objectives) through their common need for evaluation. The second is the development of PPR as a methodology for planning and for planning-evaluation. The third is the development of techniques drawn on urban accessibility and urban morphology – SAL and MORPHO. The fourth is the definition of effective forms for integrating the acquired knowledge into the so-called Planos Directores Municipais/PDM. Finally, the last objective of this project is the provision of a sound contribution for the construction of a more diverse, accessible, and inclusive built environment.

Keywords: evidence-based, performance-based regulation, evaluation in planning, urban accessibility, urban morphology

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Elderly population and urban ageing: A global problem of the last decades' urban trends

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Abstract

During the last decades, urban planning has faced several challenges and experienced different trends in order to adapt to the changing challenges of the urbanization process. These trends are mainly based on decisions made by the policy makers, planners and other urban actors, which are mostly represented by the governance. Remarkable trends like globalization and smart cities are now being influenced by a new arousing circumstance: the increase of senior citizens and the corresponding need of an age-friendly design.

The importance of planning for the ageing has proven to be a relevant topic, some international organizations such as UN Habitat and The European Parliament have decided to adopt and promote good practices for urbanism, in order to improve the future quality of live in the cities. The relevance of adopting the ageing trends into the governance decisions is a mandatory field for the prospective of the city life, especially in the big global cities, where their citizens (especially elderly people) find difficulties to cope with several problem related with the urban growth and sprawl, being mobility one of the most relevant fields to be solved.

Transit oriented urban developments (TOD) have proven to be one of the more promising trends to form inclusive communities by creating residential and commercial areas designed to ease access to public transports. This trend enables to create multi-centre communities and so, shortening both displacement time and distances. At same time these systems can be developed considering the senior citizens need, embracing solutions, both according to the mobility and with the different needs of the senior citizens.

This paper analyzes the relationship between urban ageing and the transit oriented developments (TOD) in four steps:

- Mobility needs for an urban quality of life.
- Ageing city and the metropolitan mobility problem.
- The TOD systems as solution for the city ageing.
- The study cases of the different TOD implementations.

These four main points will be related as part of the methodology that will provide the key solutions and conclusion to improve the prospective in the city ageing and will help to analyze several case studies of the TOD systems in global cities, that nowadays represent a truly paradigm for the city ageing.

A theoretical framework will be presented as part of the analysis and as part of the conclusions for clarify the benefits of the TOD system implementation in the citizen's quality of life among with other benefits like in the improvement in quality of the urban design, development and preservation.

Keywords: Urban Ageing, Globalization, Transit Oriented Developments, Senior Citizens, Mobility

Public spaces to connect generations and fragmented suburb(s)

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Abstract
In the urban peripheries, particularly in metropolitan areas, the last decades of the twentieth century were characterized by the proliferation of urban operations that reflect a lack of guidelines and the weakening of the overall planning that influenced the urban design. These areas suffer some problems resulting from the fragmentation of space, including less pedestrian mobility, with negative consequences for their socio-economic dynamics.

Some groups are particularly sensitive to this spatial reality, particularly the young and the elderly. How can some requirements be addressed, in particular regarding pedestrian mobility of young people and older, when considering the location of equipment and the design of public spaces?

In most cases the existing public spaces were designed with a residual function and are not integrated in systems and in infrastructures of soft mobility, which should be implemented alongside the building. The influence of road infrastructure, which cause the reduction of pedestrian mobility and disconnection between urban spaces, promotes an experience of *"only two scales, moving immediately from private garden to the highway, from local to global [and therefore] the wealth of future projects is undoubtedly propose connections, joints and intermediate real alternatives that will create the livability of existing territories* "(GRILLET-AUBERT, 2005:172).

The challenge in transforming the suburban area to give him the urbanity of a town, whereas the target in question is not "*fight the peri-urbanization, suburbanization or rurbanization as such, but organize in the most urban and ecological way, the habitat* " (Ascher, 2010:160), requires the application of a sustainable urban design, ie, that in addition to durable, continues to meet emerging requirements.

The creation, renewal and management of public spaces has been a way of promoting the regeneration of cities, and needs to take into account that the urbanized area has lost the clarity of the traces, the image set, the ability to encode space not built [and that] is necessary to create a sense for the visual, formal or functional link between small spaces that have varying conditions of tenure, protection and uses (DOMINGUES, 2006:352).

The case study presented is located in the metropolitan area of Lisbon, belongs to the municipality of Amadora and corresponds to the parishes of Alfragide and Buraca. It's an area characterized by urbanization processes that gave rise to urban areas with a wide variety of morphologies, which correspond to different capacity of pedestrian mobility and connection, either inside or with the surrounding territories.

We identify positive and negative examples, related to the processes of urbanization, and how can be applied principles and methodologies that empower the identification of the territory qualities and participation of different population groups, with the aim of creating polyfunctional and intergenerational public spaces (Ascher, 2007; Hester, 2007; Lukez, 2007).

Keywords: public space; urban morphology; suburban transformations; soft mobility;

Hollow Village and Urban-Rural Restructuring in China

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Abstract

During the rapid industrialization and urbanization process in China, a large number of young adults rush from the rural to the urban. They spend most of their time working and living in the city and seldom return to the rural except on festivals. The elderly, the women and the children who are not strong enough to survive in the competitive cities are left in the rural. The rural population is as weak as the hollow of a tree, so the phenomenon is called hollow village. Different from the absolute increase of the number of senior people in some aging cities, hollow village is a passive aging society which happens due to the leave of the young people.

The paper introduces the phenomenon of hollow village in the background of China's urban-rural restructuring and explores the mechanism of its formation. It contributes to the discourse of aging city by reflecting on the urban side-effect on rural elderly. The paper aims to provide measures to improve the desperate situation of the elderly in hollow village from the perspective of developing a more coherent urban-rural relationship.

The paper is based on an empirical study on the remained elderly in some typical hollow villages in Anhui Province. It takes the sample of 200 elderly people to investigate the influence of hollow village on the elderly as well as on rural China. Studies found that the economic support to the remained elderly has rarely been improved since the move of the young to the urban; more than half of the elderly suffer from disease but their medical care is dissatisfying; the elderly is lack of care from the young, instead, they often assume the responsibility of the young couple to look after the children; the leisure time of the elderly is boring and more than 3/4 feel lonely. Hollow village has also brought about serious influence to rural China, which is reflected mainly in three aspects: loss of human resources, retreat of agriculture-related industry, and waste of rural land.

After that the paper analyzes the reason why hollow village is formed in the macro background of urbanizing China and aging society. The long-term separation of China's dual economy – urban economy and rural economy – has led to intrinsic flow of capital and labor from the inferior to the superior. With the arrival of industrialization, agriculture-related industry has been upgraded and don't need so many labor any more. Moreover, there is a large income gap between the urban and the rural. All these factors contribute to the move of surplus labor (dominated by the young people) from the rural to the urban. Although the number of population in hollow village is shrinking due to the large-scale abandon of young people, there is still an aging trend in the remained population. Especially due to China's one-child policy, new-birth rate has been strictly controlled and the proportion of the elderly is arising. The flow of surplus young labor and the trend of population aging explain the formation of hollow village.

At the end of the paper, suggestions in terms of economic restructuring and institutional support are provided to help the elderly in hollow village. Favorite policies should be provided to promote the attractiveness of the rural by improving rural infrastructures, encouraging rural employment, improving medical system (especially for the elderly) and so on.

Keywords:

Hollow Village, Urbanization, Population Aging

Old, poor and lonely: from the Solitary City to the Supportive City

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Abstract

1.
The census data from 2011 confirmed the continuation of a trend that has been dragged on since the late '80s: the city centers although recognized as anchors of identity and memory, are at present, areas of depopulation, ageing and function's loss. The orthodox approach to the problem has been short sighted and proactive, aiming to reverse these symptoms to its opposite. The results have been those that everyone knows, and that Census has been making a loud but opportune advertising.

2.
Without recognizing the near and further causes behind this process it is not possible to find a sustained solution. Consequences stand out in the urban and socio-urban area: declining of the physical conditions of buildings and public space (Castro, 2002; Gonçalves, 2006), weakening of social bonds and neighborhood networks (Cardoso et al., 2001).

3.
This problem is not faced in the same way, since their signals, which are different in time and space, welcome very different or even radically different readings. Richard Florida (2008), for instance, in his *Whos's your city* stresses that in the north-American case the return of the old generations to the cities is a natural movement explained by different needs, arising from family life cycles. When a family shrinks or fragments, the needs of goods and local services increase and when income aloud the centers appear as one of the most seductive places to live. New friendship networks and contacts appear as important Knots, whether weak or strong, at this stage of individual and familiar life weakness. Centers appear as the ideal areas for establishing these new relationships.
The recognition of interest in urban centers neighborhoods, where it is possible to find all this, has consequences for residents and urban dynamics. This attraction can lead to a reformulation of property values, increasing the risk of gentrification of the resident population.

In Europe this movement displays a contradictory vision with the one that comes from the other side of the Atlantic. Here, in most cases, resident community is old but with low or middle-low income. It reveals great dependency on grants or pensions. They are not a recent group in these central neighborhoods of the large and medium cities, and this makes them the guardians of the stark identity and sense of place of this areas. But it also turns them into a metaphor of the poor, old and disqualified City. However it is recognized to the central neighborhoods, an enormous potential as areas of opportunity and proximity to explore as stage of collective life (Guerra, 2003). Opportunity is, as well, in the anomie of real estate market, in the existing buildings typologies, in the wide range of equipment available, in the pedestrian fit urban space and in installed infrastructures (Guerra, 2001; Rodrigues, 2010; Bourdin, 2011).

4.
Although this communication is part of a wider research project it seeks to raise questions in order to aid methodological device designed to support new urban policies. This methodology is organized in two parts:
i. the first part aims to demonstrate that the severity, depth and extension of this reality, to invest in its causes and to repport some of their consequences;
ii.the second part, the methodological resources focus on the speculative reflection fictionalizing a city of neighborhoods, of rebuilt social bonds, animating the city, revitalizing public spaces and developing the re-function of these neighborhoods in the offer of goods and common services.

The demographic decline in Lisbon city core

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Abstract

The main purpose of this paper is to explore one of the hypotheses of my doctoral dissertation:

- despite the population growing scenario, shrinkage occurs in specific urban areas of the Lisbon Metropolitan Area; provisionally titled "Urban shrinkage in Lisbon Metropolitan Area" and supervised by Prof.ª Sofia Morgado (FA-UTL).

This paper discusses the demographic trends and processes (fertility, mortality, household size and structure, working age population, migration and ageing) and assesses their impact on urban development (urban fabric, urban infrastructures and in the demand for services and amenities) and national or municipal policies, with particular focus on the city of Lisbon, and its historic inner-city neighborhoods.

Presently, Europe is facing both population decline (shrinkage) and ageing. Eurostat estimates that population decline is experienced in one quarter of the European regions, and it is expectable that the number would continue to grow in the near future. In the same way, the life expectancy, due to better living conditions and medical care, is predicted to rise five years from current level in the next 40 years (In men rising from 75.7 years to 80.5 years and in women from 80.4 to 85.6 years).

In Portugal, according to the Population Reference Bureau, in 2010 the share of population aged 65 years and over was almost 18%. Although the highest percentage of younger residents can be found in Lisboa e Vale do Tejo Region, the city of Lisbon is one of the European capitals with higher percentage of population (24,2%) aged 65 years and over. Most of the elderly residents are low income people living in the historic inner-city neighborhoods, in rented dwellings, with low expectations in what concerns to future residential mobility. The younger residents, looking for high housing standards, with more generous areas and better urban amenities, choose the surrounding neighborhoods. Thus, the physical deterioration affecting most of the buildings and urban amenities in the city core and the fact that they don't provide the requirements for actual housing standards led to an inner-city decline and depopulation. These trends are accompanied by a decrease in the household size and changes in its classical structure, resulting in a minor density and in the under-usage of dwellings and consequently in a higher per head consumption of housing space.

Our goal is to compare censuses statistical data (from Censos 2001 and Censos 2011 - INE), to identify these neighborhoods with high prevalence of non-classical households (normally a less stabled family structure) and high percentage of elderly and immigrant population. Then, try to relate the verified demographic trends with the Municipal planning instruments and urban policies.

The approach taken by the research was based on national and international reports, Lisbon Municipal Master Plan and by critical analysis of statistical data, derived from 2011 national censuses of population preliminary results.

Keywords: Ageing, Demographic change, core city, urban policies, Lisbon

5.

As final elements for discussion we'll argue that urban proposals can be merely reactionary interventions if they extend the agony of communities and territories, insisting in undiscussed design proposals based on abstract theoretical models.

Apart from the amount of initiatives without reflective thickness a new field of research needs to be developed based on a matrix of non-orthodox ideas. From these new visions and reflections, inputs to rethink urban policies are needed, not only when addressing the elderly but also for its role in the celebration of city's traditional neighborhoods as supportive space in opposition to the idea of solitary spaces.

Keywords: depopulation, ageing, social capital, neighborrhood community, proximity community

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Social Participation in the context of the urban public space renewal – The case of the Lagarteiro Neighbourhood in Oporto

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Abstract

In 1980, Giancarlo de Carlo wrote in the Perspecta, Yale Journal, "An Architecture of the Participation". De Carlo, proposed a sequence of procedures: the problem definition, the solution, and the results evaluation, in all the three steps, the social communities should be integrated as part of a share and dynamic process. This text corresponds to a new way of understanding the importance of social communities in the architecture definition. From Giancarlo de Carlo text, the main goal of this paper is to present the results of an intervention in public space renewal of Lagarteiro's neigbourhood (in oporto city) and the relation of this process with the participation of the resident population.

The urban context of Lagarteiro's neighbourhood presented before the intervention the typical and classic signs of disqualification of environmental and urban peripheral areas of resettlement. The term "disadvantaged areas" is associated with these areas in urban or peri-urban case, was framed in a specific Portuguese policy, called Initiative Critical Neighbourhoods.

The promoter's intervention of Lagarteiro's neighbourhood is the Office of Public Works of the Municipality of Oporto, which structured, under public policy, an integrated program of urban renewal, dealing with the social and economic situation of the district. They were scheduled 3 major axes of intervention: a first axle, predominantly material, called the Urban and Environmental Rehabilitation District, a second axle, clearly immaterial, called Promotion of Active Citizenship, and last axle of an operation and management of the program, called Being Well Network. The tangible and intangible components are inextricably linked, being the own model of control established in order to contribute to integration processes occur naturally. Reinforcing the intervention plan were taken two key steps, including the establishment within the neighbourhood of a support office to the residents, and the development of public and private partnerships aimed at active participation of different stakeholders in the establishment of a strategic development to that periphery fabric of the urban Oporto city.

The whole project represents an intervention of about 7.00 ha, whose guiding principles were: a) Introduction crossings in the North / South and East / West, in order to promote new mobility flows. For this opened up new links between the neighbourhood and surroundings, and set up a new street in central urban core through rigorous design and precise matching of the topography; b)Ensure footpaths on access to disabled people, enabling greater social inclusion at the level of public space; c)General review of Infra-structure of the neighbourhood, particularly in terms of networks of water, sanitation, security, telecommunications and special importance, public lighting, to avoid areas that are too obscure; d)Definition of a vegetation plan composed of a diversity of tree and shrub types, taking into account the effectiveness and ease of maintenance; e)Establishment a reduced range of materials, based essentially on granite cubes, yellowish in footpaths and gray in roads. Gaining the support walls was performed using a specially prepared formwork for this purpose; the final aspect is defined by high-reliefs of triangular section, which together produce a kinetic effect when exposed to light.

So far the results of the intervention were positive; there were no difficulties in implementing the general objectives of the intervention. The success of the intervention has to do with previous desire, expressed by residents, by a rehabilitation intervention of public space and buildings of Lagarteiro's neighbourhood and also the social work able to mobilize residents to the proposed changes. Despite having been completed the basic objectives by opening the quarter Lagarteiro to its surroundings, there are some adapting difficulties to a few residents to the new paradigm introduced. Although residual, the points where resistance can be observed are the improper parking on footpaths in order to have the car next to the door, and the misappropriation of public space with poor facilities in an attempt to extend the private area at the expense of public good.

Being a recent intervention, the renewal of the public space in Lagarteiro is a complete case study that allows to understanding the participation phenomenon in nowadays, at the same time that seduces a reflection about technical and architectural solutions for "critical" neighbourhoods.

Keywords: Participation, neighbourhood, governance

City and care

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The focus of my research deals with care practices that take place in urban spaces. Care practices concern the whole universe of actions addressed to children and elderly people that in a certain period of time need help from others, help offered most of all by female relatives. This theme is closely connected with issues regarding urban life, welfare spaces and policies, quality and accessibility of public spaces. In fact, care practices could be addressed not only to people, elderly or children, but also to the whole system of urban spaces, because of their relevance in daily life especially of elderly. The issue of "aging cities" closely refers to the issue of care, not meaning only the welfare side of the word, that recalls to mind assistance activities, but also the wider sphere of practices that take place in urban context, that take into account practices addressed to elderly and to urban spaces system. The expected outcome of the research is a portrait of Italian panorama on care issues grounded on urban areas, understanding the key urban factors that can improve the quality of life of *care givers* and *care users* and*,* especially looking on the Italian context, what are the policies implemented and what are the results and the possibility of improvement. The key factor of the research is connected with its innovative point of view on themes that are often related with gender issues, bringing them to a neutral field, the city with its spaces and the practices that here are held by inhabitants.

Keywords: practices; welfare spaces; social services; urban spaces quality.

The biogeophysical and socio-economic contexts portuenses and the worsening health of individuals with stroke, Dyspnoea and Chest Pain & Asthma, expressed the urgency of daily entries in HGSA (2005-2008)

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Abstract

The investigation project aims to investigate the multiple and complex relationships between the climatic context, in this case the temperature, the biogeophysical support, the socioeconomic conditions and health aggravation expressed by the daily entries in the urgency services of the General Hospital of Santo António (HGSA) of individuals suffering from Stroke, Dyspnoea & Asthma and Thoracic Pain (2005-2008), whose final destiny was to leave the health service.

The development of this research involved a methodological process that included analysis and processing of records of daily entries in the ER, whose destination was the hospital discharge stroke, Dyspnoea and Chest Pain & Asthma, occurring between 1 January 2005 and 31 December 2008, HGSA, which were previously extracted Alert system, analyzed and validated by Dr. Humberto Machado, director of the Emergency Service of the HGSA and co-advisor for this study.

There were two distinct approaches to data. The first refers to the statistical treatment of data collected according to the criteria of age, gender and spatial distribution of crossing them with the socio-economic level of the section. In the second, was established to compare the data with the context of biogeophysical conditions, particularly the thermal level recorded from the acquisition of daily records of temperature on the Climatological Station of Porto - Serra do Pilar (IGUP) between 1 January 2005 and December 31, 2007.

The results suggest that the is a very expressive relationship between morbidity due to Stroke, Dyspnoea & Asthma and Thoracic Pain and the socioeconomic and biogeophysical contexts of the most affected individuals. The highest aggravation frequency of the health status in each one of the three pathologies seems to be associated to the most disadvantaged socioeconomic contexts in Porto (low educational level, highest

demographic aging, high social isolation, poor quality housing, spaces with lack of green areas and leisure, etc.) and occur, in higher number during periods when the thermal variability was high and/or the temperature had an exceptional behaviour (mainly very low minimum temperatures). It was found, for example, that the occurrence of the most severe episodes in each one of the three pathologies coincided with days when the thermal variability during the 2 or 3 previous days and/or the thermal amplitude was very high.

Good practices of the urban policies as an answer to the constraints of ageing

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Keywords: Ageing, urban policies, parish of Vitória (Porto)

The observable demographic seniority, at both national and international scale, more precocious in the developed countries and, nowadays, arising in the developing countries imposes new answers, adequate to a global society which is increasingly more aged.

From this aging various constraints are highlighted, with special relevance in the poorer societies, such as: the reduced mobility of the elder, the lower accessibility, the growing social isolation, the deficit of green spaces and spaces for socialization, the distance to social equipment, the lack of care (of health, hygiene, therapy) at home resulting from the imbalance between the offer and the real needs of the population and a financial inability to support them, the precarious housing, the imbalanced feed, the financial constraint towards the performance of leisure-recreational activities, the greater distance in the relationships with children and grandchildren resulting from changes in the family structures, among others.

The starting point of the urban policies towards the definition of measures that contribute to satisfy the needs of the elderly, as well as to improve their quality of life must be based on the basic principles for the elderly, defined by the General Assembly of the United Nations in 1991. The independence, the participation, the care, the self-realization, and dignity must be, thus, the pillars of the urban policies. Thereby, the good practices' representation are those able to promote: i) the physical and financial independence, this is, the access to the basic rights of the human being (food, housing, health, work and education); ii) the participation through the integration of the elder in society, which requires sharing of their knowledge and abilities with the younger, by the way of socialization; iii) the care which satisfy their fundamental rights and freedoms, through familiar and institutional care; iv) the self-realization, which implies that the elder render their potential through the educational, cultural, spiritual and recreative resources; v) the dignity which requires the assistance to the elder of a worthy and secure life, free from maltreatment as well as any other way of exploitation.

In Portugal, the ageing process is also increasingly more striking, not only in the depopulated interior, but also much accentuated inside the leading counties of the Great Metropolitan Areas. The county of Porto constitutes, thereby, expressive an example of an ageing index of its population, being ever-increasing during the last decades.

Accordingly, the present study chosen to select the parish of Vitória, considered as a parish where many of the problem associated with ageing are gathered. In its territory, it is possible to observe problems of high social isolation, where a very high percentage of elderly inhabit alone. Furthermore, many elderly do not benefit from the support of a closer familiar structure: children, due to their premature death in result of a drug addiction and an AIDS virus phenomenon. This parish does not offer to its residents a significant stain of green areas which serve the purpose of socialization. The

question of mobility is also considered as a difficulty to its older dwellers, due to the fact of the morphology of its territory present high slopes which hamper walking promenades. Furthermore, the housing quality of the older individuals is generally very weak, characterized by very old buildings in very bad conservation state. Together with the precarious housing, insalubrity represents another visible problem, once the streets are narrow, which contributes towards a high solar obstruction. This fact can also explain the high percentage of elder which suffer from health problems, namely, from the respiratory forum.

Before the territorial context of the parish of Vitória (Porto), where the active and intergenerational ageing finds various constraints, it urges to look for answers and practices of success from other international contexts, where these problems were able to obtain answers.

The methodological steps of the present work pass through the:

i)   Presentation of the specific problems which characterize the different cities characterized by a high aging index;

ii)   Bibliographic research about good international practices, specially the European ones, for the resolution of the problems of the elder;

iii)   Characterization of the main strength and weak points, as well as opportunities and constraints of our case study, of the parish of Vitória, through a SWOT analysis;

iv)   Adequacy of the international good practices to the parish of Vitória, with the objective of minimizing its main constraints related with the elderly;

Our study would like to be relevant through: i) a contribute for a better adequacy between the third ages' needs and the actions taken by part of the urban planning and urban policies of the parish of Vitória; ii) an involvement of different social actors (local power, social security institutions, companies providing home services, civil protection, public safety agents, neighbourhood, family, volunteering associations, shelter program, among others) as an answer to the conditioning of the elderly population of Vitória;

Environmental and Socioeconomical Determinants of ageing in the Great Metropolitan Area of Porto

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Keywords: Ageing; Urbanization; Environmental, Geographical and Socioeconomical Determinants.

The progressive aging which features the global actuality, where a growing trend of people with more than 60 years of age will go up from 11% in 2006 to 22% in 2050, (OMS, 2007) should be considered as one of the major concerns for the human kind.

The backdrop where this demographic tendency unfolds happens, mostly, in urban contexts. This seniority tendency accompanies the worlds' accelerated urbanization rhythms, observable not only in developed countries but, nowadays, generalizable to developing countries.

The worlds' urban growth, estimated around 5 billion people in 2030 (United Nations, 2008), brings up a series of constraints that the elder society is forced to face, representing real challenges for itself, as well as for the society that is challenged to act.

The problems accompanying the third age are various, going from the continuous vitality loss of the human organism, to other functions' decline, as it is the case of the labour function and, consequently, the social and economic function. This vitality loss is often aggravated by the urban lifestyle. Therefore, problems like **social isolation** (resulting from a straight neighbourhood relations network and new familiar structures), **social exclusion** (increasingly promoted by a culture dominated by the values of youth), the **lack of open/green spaces** (which can contribute towards the practice of physical exercise and recreational and leisure activities for socialization), an **unbalanced diet** (where food rich in fats and proteins gain weight comparatively to the legumes' diets), the **frequent economic difficulties** (associated with low pension incomes and, often, with the high costs with health) aggravated in city contexts (where the living costs tend to be higher), the **higher exposure to environmental factors** which are harmful to health (as it is the case of pollution and the extreme climatic events) are some of the examples contributing to impair the quality of life and well-being in this last stage of life.

Therefore, the maintenance and improvement of the health from individuals requires the knowledge of the main social determinants affecting ageing which faster lead them to death. Accordingly, the identification of the individual determinants (age, gender, genetic heritage, health of the individuals), behaviour (personal hygiene, diet, physical activity), physical environment (exposure to pollution sources or uncomfortable thermal environments) and socioeconomic determinants (incomes, schooling level, relationships network, housing conditions, among other factors) must constitute a concern by social agents, where health entities are included, as well as social security, civil protection and territory planners.

During this year of 2012, while the attentions are focused in the elder population, once it represents the European Year for the Intergenerational Solidarity and Active Ageing (European Union, 2012), it also comes to light an opportunity for the scientific investigation to consolidate efforts in developing new contributions towards the improvement of life for the older population. Geography, in particular, is awakened by the curiosity in continuing to invest in the theme of the geographic determinants which affect the quality of life and well-being of the older individuals.

Thus, taking for granted the recognition of the ageing determinants, this study looks forward to identify some of the main individual determinants (such as health), environmental (like climate) and socioeconomic (related with housing, families and employment) that condition the ageing understood in the context of the Great Metropolitan Area of Porto (GMAP). Accordingly, some methodological steps are outlined, implying:

 i) The temporal and spatial recognition of the ageing index in the GMAP;
 ii) The cartographic representation of a health variable, namely, the internments due to myocardial infarctions by elder individuals;
 iii) The recognition of the importance of this pathology in Porto, comparatively with other scales;

iv) The detection of peaks in hospital internments due to myocardial infarction from people with more than 64 years of age;

v) The study of the association between the climatic behaviour (average and extreme) of myocardial infarction internments;

vi) The contribute of geographical determinants (exposure of slopes and slopes, presence of green areas, construction density, thermic anomalies, between others) in emphasizing/attenuation of the extreme climatic events;

vii) The spatial representation of an index of multiple privation inside the context of Porto;

viii) The representation of a risk map for elder people with myocardial infarction resulting from the climatic, geographic and socioeconomic determinants;

ix) Presentation of some territorial intervention proposals, either in the perspective of urban planning, or in the minimization of the risk for public health in the presence of emergency situations.

The study of the internments due to myocardial infarction in the elder population will be based in the daily morbidity records, from 2000 to 2007, in four hospitals (São João, Santo António, Pedro Hispano and Santos Silva), located in some counties from GMAP.

For the study of the relationship between health and the climatic variables, the daily records of maximum and minimum temperature, atmospheric pressure and relative moisture will be used, having these been obtained from the Meteorological Observatory of Serra do Pilar.

The spatial representation of the different variables (health, geographic and socioeconomic) will be based in the techniques used by Geographic Information Systems (GIS).

Some of the main results seem to highlight the role of coldness in increasing the biological fragility from the individuals, as well as the assignment of responsibility for the social inequalities in the emphasis of the aggravation status of the health conditions of the elderly from Porto.

Mobility and aging: contribution of recent technology

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Abstract

Population ageing and urbanization are two global trends that together comprise major forces shaping the 21st century: cities are growing and their share of residents aged 60 years and more is increasing.. World Health Organization (WHO) regards active ageing as a lifelong process shaped by several factors that, alone and acting together, favor health, participation and security in older adult life. The process of population ageing is a phenomenon of global dimensions that within a few decades will lead to major demographic changes. Ageing involves a degree of changes in sensory abilities of the individual which in some cases can lead to greater dependency, lowering cognitive and physical skills. This seriously affects the mobility of an elderly person, as disruption combined with a sense of fear plays a role in reducing the sense of ease, especially when aged people try to access public spaces.

Informed by WHO's approach to active ageing, the purpose of this article is to investigate how cities could become more age-friendly so as to tap the potential that older people represent for humanity. An age-friendly city encourages active ageing by optimizing opportunities for health, participation and security in order to enhance elderly persons quality of life. In practical terms, an age-friendly city adapts its structures and services to be accessible and inclusive of older people with changing needs and capacities.

Transportation, with particular attention to information and communication accessibility, is a key factor influencing active ageing: being able to move about the city determines social and civic participation and access to community.
Starting from the achievements of existing projects (Aeneas, BRAID, Sociable, Tseniority) and European Joint Research Centers reports , in this article we try to better understand the problem of public spaces mobility and accessibility. It means to identify how existing technologies could be integrated with the new approaches in urban planning in order to fit elderly people mobility needs.

Nowadays technologies allow to be permanently connected to the web and, together with geo-localized services, they can be used to provide personalized services aimed at matching single person's own schedules with public transportation and communities of reference. Also, new services provided by municipalities, could be thought to be smart-device driven.
In tackling the problematic of ageing society and mobility, one approach is to develop services specifically thought for the mobility and information of young seniors. This could be done using knowledge based systems. These systems match information received from external information and communication sources of different nature (i.e. localization, traffic info, event schedules, public transport timetables etc.) with specific personalized needs that could be directly expressed by the users.
The generation that is now facing seniority in fact is no stranger to technology and internet and could easily get used to new services of such kind. Therefore new applications running on portable devices aimed at monitoring and supporting elderly people in the exchange and reception of mobility information, related to their customizable needs and daily planning, is one possible way of assisting seniors in their daily life.

On the side of fruition of spaces, and access to transport modes, we want to underline that ageing people are often fully self-sufficient and capable of moving independently. Nevertheless, the way the cities and urban environment are structured, and as well as some entertainment events, might be discouraging for seniors due to the lack of facilities, overcrowding and lack of comfort.
In order tackle these kind of problems, what we want to suggest is that urban environments, including street surfaces and interchange areas, should be more comfortable and accessible to pedestrians to become more attractive to elderly people and therefore to encourage their mobility.

Pedestrian mobility sustainability, especially in urban areas, is an aspect that is not always sufficiently highlighted and considered. Some of the most significant directions for improvement of the current urban situation is summarized by the "European Charter of Pedestrian Rights (EU parliament 1988). The latter, goes beyond simple safety for vulnerable road users (i.e. pedestrians and cyclists), but it also encompasses more general notions of comfort, accessibility to essential and accessory services, possibility of fruition of public spaces and environment. This means more pedestrians roads, distributed services, clear information and sign-posting, shelters, benches, green areas and public conveniences distributed on pedestrian routes and squares that can become centers for daily life of cities.

In order to make mobility more accessible for everyone and, as consequences, also for elderly persons, many techniques have been developed in recent years those are a valid aid to planning and design. Micro-simulation models, for example, for the study of pedestrian dynamics have reached a sufficient predictive accuracy to be adopted as a consolidated practice in the design and planning of collective and public spaces and facilities. This approach represent each pedestrian and vehicle as an autonomous agent. The main contexts of application are: transit stations; airports; sport venues; retails; private and public buildings; entertainment and city surface.

These tools already allow to take into account the movement characteristics of People with Restricted Mobility (PRM) and also several kinds of walking speed have been profiled.

Agent based approach would be sufficiently expressive to give account also of ageing people walking habits and characteristics, nevertheless these characteristics have not been fully defined yet. Therefore we believe that micro-simulation tools would constitute a valid support to the design of spaces and services for mobility in an environment thought for ageing people if used in combination with sociological studies aimed at profiling ageing people mobility characteristics, habits and needs (i.e. comfort needs, speeds, etc.).

This paper aims at investigating how existing technologies could be used to improve on one side personalized services related to mobility provided on personal devices and specifically thought for young seniors, and, on another side how new technologies can support urban planners in the design of schemes and services aimed at assuring more comfort in the fruition of the city and thus encourage mobility also of elderly people.

Keywords: mobility, aging, recent technology,

What TOD can do for ageing communities?

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The ageing population is becoming an increasingly pressing issue for communities. By 2030, almost one in five Americans—71.5 million people—will have over age 65. At some point in their life, seniors, all over the world, will find that their ability to navigate by individual motorized vehicle diminishes or disappears over time. Many will rely on relatives or friends to take them around, and a smaller number will move to places where services and activities are close by. These millions of older adults will need affordable alternatives to driving in order to maintain their independence as long as possible.

The degree to which they can participate in community life will be determined, in part, by how well their physical environment accommodates them and how is the level of services provided.

Pedestrian-friendly streets and recreational trails must be built taking into account seniors necessities, in order to help them get around safely and remain active, regardless of where they live. But only adequate public transportation services can assure that older adults are able to travel as often or as far as they would like, without worrying about inconveniencing others.One possible approach, being taken by planners, is to create more livable communities where people can easily move through Transit Oriented Development or TOD.

The concept of TOD is not exactly 'new'. Cities in Europe, North America and Australia post Second World War have many of the characteristics of TOD communities integrated into their planning. TOD as a specific policy measure has emerged in the last twenty years particularly in cities found in Australia, Canada and the USA, concentrating growth in the city centre to avoid urban sprawl and advocating a more 'compactable approach' to land uses and transit needs.

Many authors try to distinguish TOD from other movements in urban design by highlighting the fact that the promotion of public transport use is the driving force. Robert Cervero is one of the main authors dedicated to this subject, as the following statements fully demonstrate.

- "TOD is one form of contemporary stimulus of street life and diversification of urban landscapes. It is distinguished from other forms of smart growth, of course, by the presence of a railway station" (Cervero, R.; J. Murakami (2008)).

- "The concept of Transit Oriented Development (TOD) is a growing approach to encouraging compact, mixed use development while increasing transit ridership and yielding more livable communities." (Arrington, G. B.; R. Cervero (2008))

Communities are looking to innovatively use this approach to integrate land-use and transport planning, and therefore address the needs of an ageing population. In addition, TOD has seen significant results in addressing affordability and increasing walkability – two important components to addressing the needs of an ageing population.

This paper summarizes the review of a state of the art of successful TOD policies through the analysis of case studies and state reports that had contributed to foster ageing in place. It is expected results related to land use, transportation and housing strategies that help older adults age in their communities.

Keywords: TOD, ageing, policies

Beyond an "age-friendly" city: participation of elders in the social production of space through urban agriculture practice

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Abstract

Since 2008, the percentage of urban population exceeds rural population (UN). The passage from rural to urban, as studied by Henri Lefebvre, makes progressively disappear a whole of rural values, know-hows and habits carried by the elders. In cities, mainly in suburbs, the practice of urban agriculture, high potential of elders inclusion in the urban community, is a physical witness of this transition.

The globalization of urban society led by exchange value (Lefebvre) generates a phenomenon of exclusion of elders at different levels. First, in this system ruled by economy, a typology of "active life" is defined, excluding elders from their productive abilities. At the level of the community and family, often fragmented, the figure of the elder tends to constitute a formal group of "inactive people" in society. This is concretised notably through physical structures of support for elders or in their isolation in terms of social proximity in urban ocean; different than virtual relations. The predominance of "health" measures for this social group contributes to the discrediting of the body, until the own perception of the individual, pushed down to be an "aided people".
This identification doesn't consider elders able to be stakeholders in the social production of the territory.

The globalization leads to a gentrification (Sennett) -at the broadest sense of the term- at the operational level of production of the territory. The speed of the process renounces to the notion of biologic time (Tiezzi). Through the cyclic process of urban agriculture, the elders are a flywheel of biological time as a structural concept for another urbanity.
In parallel to this dynamic, the proportion of elders in world population will double until 2050 (WHO). These evolutions will compromise individual as well as collective entropy. Due to the fact, the risk is to generate the lack of steady state in capacity to guarantee social inclusion of this part of the population.

The progressive disappearance of urban elders, immigrating from rural world, underlines the emergency of the inversion of this phenomenon. The practice of urban agriculture (Cabannes), activity and product for this population is a potential to acquire the right to the city (Lefebvre), taking in account the will to substitute *exchange value* by *use value*, as a condition to create inclusive urban communities.

To give access to the appropriation of the urbanity, or to give the possibility to use the land, at the same time means producing the city as an *oeuvre*. Nowadays, to value empowerment (Freeman) means to mobilize urban stakeholders concretely, as the elders through local practices like urban agriculture. From one side, it allows to create independence from exogenous interventions on public space and to self-generate it. On the other side, the intergenerational and ludic dimension of this practice ensures inclusive social relations, temporary restructuring the family, e.g., while the harvest.

To recognize the declensions of the right to the city in the practice of urban agriculture gives an effective answer to various problematics of the ageing cities. In the context of post-industrialization, urban revolution (Lefebvre) can be reflected by various study cases of territory planning where participation is included in the policies of municipalities, e.g., in South America. It is necessary to elaborate new methodology looking to the mirror of the minority existing reality (urban agriculture) to implement this practice in the agenda of local power. Self-referentially, we should underline that it doesn't mean going back to the past but opens a path to an alternative urbanity. This could generate structural coherence of the territory, e.g., through vitalization of non-spaces (Augé), witness of nowadays fragmented urbanity.

"Stopping means dying", points out the old cultivator, living in informal neighbourhood of Cova da Moura (suburbs of Lisbon).

Keywords:

urban agriculture, social production of space, right to the city, biological time, empowerment

Age-Friendly Cities Performance Index: a management tool

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Abstract

Populations ageing together with urban growth represent the main changing factors in the 21st century world scenario. United Nation Organization (UNO) forecasts show that by the year 2050 the world population for people over 60 years old will reach 2 billions of elderly. Furthermore 68% of the world population will inhabit cities (urban precincts).

Cities are political, social and cultural activities centers, and in order to be sustainable, must provide services and infrastructures that account for the well-being and productivity of the inhabitants. Considering the older residents, there is the need to enable the surrounding environment to offer support and qualification, as to compensate the social, psychological and physical changes related to ageing. Aware of the population ageing phenomenon, the UNO, held in the year 2002, in Madrid the Second World Assembly on Ageing, defining the guidelines that support the public policies concerning the elderly population in the 21st century.

The proposals emerging for this event were based upon a new idea of old age, sustained in the concept of Active Ageing. Active Ageing is "*the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age".* It applies to both individuals and population groups.

Within this new paradigm, strategic planning of public policies for the elderly, shifts from a need based focus (assuming the elderly as passive targets) to a rights based focus, allowing the recognition of the elderly rights to equal opportunities and treatment in all aspects of life.

Under this scope, the World Health Organization (WHO) conducted a worldwide survey, comprising 35 cities, from different parts of the world, aiming to develop a mobilization tool encouraging cities to become age-friendly cities. From this initiative resulted a Guide for "Global Age-friendly Cities and Communities" and the launch of the "Global Network of Age-friendly Cities" as an incentive to continuous improvement of aged-friendly policies and programs.

The WHO considers an *"age friendly city as a city that encourages active ageing by optimizing opportunities for health, participation and security in order to enhance quality of life as people age".* In practical terms, an age friendly city adapts its structures and services to be accessible to and inclusive of older people with varying needs and capabilities.

Considering the premise that the ageing process is a phenomenon with multiple implications in the various aspects of social life, promoting a better elderly quality of life requires an integrated and complementary action from the different public actors and the civil society. Such a scenario emphasizes the need for elderly caring public policies, comprising among others concerns, diagnosis procedures and decision support tools for investors and public managers dealing with the issue, enabling the strengthening of the elderly caring network and the promotion of quality of life of this population.

The present paper aims to present a brief reflection on the potential of the Age-Friendly Cities Performance Index as a management tool helping decision makers in the "Active Ageing" opportunities optimization of the population, at local level.

Research methodology for the present review was mainly descriptive, presenting the modeling of indicators system as a decision making support tool.

From the obtained results, it is clear the importance of the proposed indicator, the "Age-Friendly Cities Performance Index" as a management tool helping public managers in the decision making process regarding the building of urban environments capable of optimizing the participation, health and safety opportunities, thus improving the quality of life of people as they grow older.

Keywords: Active Ageing, Age-friendly City, Performance Index, Decision Support.

Ageing cities: redesigning the urban space.

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Abstract

The existing city must be redesigned with the elderly population in mind. This paper aims at questioning the way urban designers, architects and landscapers are forced to rethink the existing city and all new public spaces: environments conceived for the "average, healthy young users" must be overcome by a participatory approach based on universal / inclusive / democratic / active design, thought to welcome the aged and frail and therefore all users: young children, people with baby carriages or heavy loads, temporary handicapped (Hanson, 2004).

This means that designing with *special needs* in mind will no longer be the answer: a mind-shift towards *inclusive design* will be the new code for urban space. It will no longer be a question of *working for* the people but *working with* the people (Sommer, 1983), listening to them and evaluating their needs, letting them participate as *specialists on their own needs*, so that architects and urban designers can develop the appropriate solutions for the clearly identifyed new problems of old urban dwellers.

Most urban spaces, the way they are today, do not fit the needs of an active-ageing population. In fact, if we want the elderly to remain living inside the city-centers, we must provide them with urban spaces designed and conceived for their physical and psychological constraints, taking into consideration that they are the valuable guardians of the collective memory of the city. And as health declines, the range of urban space used by the elderly will gradually shorten into a restricted area of personnal comfort. Thus, the existence of ramps, wide sidewalks and paths, green spaces, benches and drinking fountains with appropriate heights, smooth pavements with different colours, sub-spaces with group benches and tables, information points, efficient public lighting, all this will make daily life at city centers easier, safer and more pleasant for the elderly — and society in general. Rethinking the transportation system will also be an important clue for a population who lives longer without a drivers' license, therefore depending on easy public transportation.

Lisbon is an example of this *grey revolution*: in 2001 it was already the European capital with the largest proportion of seniors among its residents. And for the first time in History, the elderly (people above 65 years of age) outnumbered the young in Portugal during the 1990's (Machado, 2007). This new demographic reality, in line with the global tendencies worldwide (WHO, 2007) must lead to a new design approach towards the urban and housing environments.

The paper is organized in three parts. The first one reviews demographic tendencies and identifies the main needs of the elderly in public spaces.

The second one discusses the advantage of *active ageing neighbourhoods* vs. deserted public spaces in housing areas, the issue of intergenerational spaces and new design solutions for inclusive urban spaces, focusing on case studies in Lisbon.

The third part concludes that if we adapt urban spaces (streets, squares, parks, public buildings) to the needs of the elderly, they can more easily *"age in place"* remaining in their lifetime neighborhoods, close to friends, relatives and acquaintances — therefore contributing for a living city.

The paper concludes that in terms of urban space, *active ageing* means, for the elderly, the possibility of leading an independent life in an urban environment free from obstacles, where they can easily move about, the possibility of shopping in local commerce (contributing to keep alive their neighborhood), working in part-time or volunteer jobs in the community. Families in general will feel less stressed keeping their daily routines by knowing that their elderly are living in their lifetime house, surrounded by friendly neighbours, shopping safely from the local sellers. And for the *ageing city*, at daytime, while its young working dwellers are away at the offices, schools and commerce, this *silver-headed community* will be the "eyes on the street" (Jacobs, 1961), keeping some movement around in the otherwise empty housing streets and parks.

This is the new active-ageing scenario we would like to bring into discussion in terms of age-friendlly urban spaces.

Keywords: Ageing cities / active ageing / urban memories / neighborhoods / accessibility / universal design

The choice of elderly people – living on *liveable* streets?

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Abstract

Recent research has focused on how built environments shape choices available to elderly people, and we have started to understand that particular groups in our societies react differently to the norms of development that otherwise might prevail. The decline of local shops and neighbourhood services as a result of car dependency in our wider society means some elderly people, as they become less mobile, might find it more difficult to get access to the things that they need. At the same time we also know that elderly people sometimes feel stuck at home, unwilling to just go for a walk, get some exercise and socialise, as streets have become dominated by traffic and lack meeting places or conviviality. In contrast to the idea of moving to a retirement community, many people in the UK choose to stay in their own homes for as long as possible as they approach later life, but do the environments outside their front door still allow them to lead fulfilling lives in a wider community? This paper will reflect on these trends, and then consider the role that recent neighbourhood planning concepts and liveable street initiatives in the UK might have on changing the perceptions of elderly people towards their neighbourhoods

Designing public spaces for increased socialization amongst people of all ages

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Abstract

«Today there is an increasing need to design for contact as family sizes dwindle. More and more people live alone, the proportion of old people increases, and more people do monotonous jobs with little collaboration», M. Egelius (Mikellides, 1980, 137)

This project involves the socialization issues in the public space of the city. The main aim is to encourage communication and interaction between strangers of various ages in the realm of public space (using public areas).

One human psychological need is to come in contact and interact with other people. Communication between people, whether verbal or non verbal, is essential in order for interaction between people to take place.
Verbal communication describes the ability of two or more people to communicate through speaking. On the other hand, communication can take place in the absence of speaking. Speaking in such cases is replaced mainly by visual contact, which encourages non verbal communication.

The aim of this study, which involves the subtleties of communication between strangers who use public space, is expected to be enhanced through the adaptation of "informal acting" in the public area of the city, so that groups of people of different age-groups and varying degrees of familiarity with each other may take part in the impulsive, informal performance of the city as actors or spectators.

Visual contact – an important component of communication between people - is equally important in acting or in some form of performance where communication between the actor and the spectator is achieved not only through words, but through the sense of vision. An actor's expressions, body language, posture or movement – elements that become apparent through vision – are complementary elements, equally important to speech for the sense of expression of a theatrical character.

Two criteria were used for the area selection. To ensure the constant flow of people in the area, it was considered important that the design proposal should occur and be aligned or should work towards creating an obvious passage between two destination nodes which are within walking distance of each other. The presence of available public space in the area was also considered important because it enables the development of public uses. The relation of such uses to the surrounding area along with their operation and design, aim at augmenting the communication between people.

Taking the criteria above into consideration, a section of an informal corridor was chosen for this architectural and urban design exploration, which connects the historic core of Strovolos - a municipality within the Nicosia district of Cyprus - across the Pedieos River and its adjoining linear park to the City Hall and Municipal Theater area beyond.

The significant vehicular traffic through the centre of Strovolos and the lack of adequate parking or pedestrian corridors for efficient and safe access in the vicinity of the historic core discourage the passage of pedestrians and hence the social contact between people. Currently, people's movements are infrequent and are usually due to some prescribed journeys to and from specific nodes that exist in the area, or between current public uses located therein, where such uses are complementary to each other. Corrective interventions at the urban scale are therefore essential in order to increase the frequency and density of pedestrian use thereby activating the proposed corridor and the surrounding area. Pedestrian movements are essential if these informal "theatrical performances" are to take place in public urban space.

One of the aims of the design in the urban scale is to reinforce the existing commercial zone by adaptively reusing a number of abandoned buildings along the sides of the currently downgraded commercial zone, to increase the length of stay and frequency of passage through this area.

Suggestions about the addition of complementary uses to current public uses with the aim of encouraging pedestrian movements from one such use to the other, apply to the urban scale as well as to the area of intervention. In the periphery of St George's church, abandoned buildings can be used to create an afterschool care station for children, a complementary use to schools in the area. A gym and an acting workshop, as

Designing public spaces for increased socialization amongst people of all ages

complementary uses to the existing linear park, and to the theatrical workshops, schools and Strovolos Municipal Theatre respectively, can be designed in the area of intervention as part of the suggested programme. Additionally, a cafeteria can be designed as a complementary use for many current uses in the area. Lastly, a building used as a marketplace – an existing complementary use to the houses situated within a radius of less than 1 km - which interrupts the direct connection of the intervention area with the Chryseleousa church, situated in the historic core, is suggested to be removed and its uses relocate in the area of intervention.

The above interventions are expected to activate the use of the proposed corridor by people of various ages.
In order for the movements described above to be possible at an urban scale for people of all ages, it is important that some vehicular circulation routes, which may be activated via pedestrians, to be pedestrianized, while others will be designed in such a way that pedestrians get priority. Additionally, some empty spaces on the periphery of the core are intended to be used as parking places encouraging people to park there and continue their exploration towards the historic centre on foot.

The theoretical context presented above aims by utilizing architectural and urban design tools to create a physical environment appropriate for all ages that sets the stage, so to speak, for enhanced communication to occur in the everyday life of people using it. The spectacle that life offers with the proposed public uses consists of the opportunities for informal performances that the main characters of each use can communicate to pass-by spectators by sending non verbal messages about themselves.

These public uses can also encourage people to remain in the area for a more extended period instead of using the area as a mere passage from one node to the other. Opportunities for stopping are designed in such a way that they supply direct visual contact with the spectacle of the city as it unfolds around them through the existing and the proposed uses and points of reference and interest. Additionally, their general positioning in the area can encourage the visual contact of flows of people in the foreground, with the unofficial performance taking place in the suggested uses in the background.

Measuring the physical characteristics of the neighborhood correlated with an active ageing

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Abstract

Research problem
How to measure neighborhood built environment features potentially linked to active ageing?

Relevance for the conference theme
This paper describes a method for measuring the age-friendliness of residential neighborhood design. The assessment tool was based on a review of instruments with known psychometric properties and on methodologies used to measure neighborhood built environment attributes associated with older adults' behaviors that reflect an active lifestyle. The review was informed by a previously developed classification scheme of physical characteristics of an age-friendly neighborhood that identifies spatial patterns influencing the health and well-being of older adults.

Background
Active ageing has been identified as a key strategy of fostering older adults' empowerment and quality of life. Remaining active in old age can be achieved integrating physical activity in daily routines and through participation in social, civic, economic and recreation activities. Participation in such activities has been associated with a reduced risk in aging-related decline in physical function, and a~~and a~~ preserved physical function improves the ability to perform physical and social activities in old age, forming a virtuous circle that optimizes opportunities to age in place.

Currently, there is growing recognition that older adults' physical activity, social participation and physical functioning are influenced by objective and perceived physical attributes of the neighborhood, but most available neighborhood assessment tools have been validated for adults and do not take into account the complementary nature of the perceived and objective neighborhood environment. To understand and evaluate the impact of the built environment on active ageing researchers need measurement tools validated for older adults that assess the influence of the built environment on older adults' behaviors and measure the perceived and objective neighborhood built environment simultaneously.

Aim
This paper presents an environmental questionnaire of residents' perceptions and a set of objective measures for assessing the neighborhood built environment features that may be linked to active ageing~~, . It aa~~ssume~~sing~~ that older adults' physical activity and social participation are relevant indicators of active ageing and that physical functioning is both a consequence and a precondition for an active lifestyle.

Methods
To achieve this goal, we reviewed instruments and methodologies with known psychometric proprieties that measure perceived and objective neighborhood built environment attributes associated with adults' physical activity. To guide variable selection and adapt to older populations measures validated for adults we used a previously developed framework of physical characteristics of an age-friendly neighborhood. In addition, we also reviewed methodologies used to measure perceived and objective neighborhood built environment attributes believed to be associated with physical activity, social participation and physical functioning of older adults.

Variables unrelated to outcomes among older populations or found to be redundant with other variables were excluded, the constructs of social participation and physical functioning were included in adapted measures of environmental correlates of physical activity and some variables currently measured in observational instruments were refined.

Results
As a result, a questionnaire to assess perceived neighborhood design features correlated with physical activity, social participation and physical functioning in older adults, and an observational measure for use at the neighborhood scale were developed. Also, GIS-based measures correlated with active ageing and currently available for Portuguese cities were identified. The questionnaire and the observational audit tool include comparable variables and define neighborhood as the built environment within a 400 m and 800 m radius around older adults' residences.

Conclusion

These tools can be used to assess the compatibility of the neighborhood built environment with an active ageing. Findings obtained may be translated into design guidelines, policy recommendations or be used to support effective urban design interventions.

Urban Design and Ageing - public space for elderly people in residential areas

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Abstract

The issue/research problem

> *"Ageing in the 21st century"*[1]
> "*Population ageing and urbanization are two global trends that together represent the major forces shaping the twenty-first century.*" [2]

The theme converges to the motto of WHO and to the election of 2012 as the year of active aging.
Inseparable, the concept of quality of life (the society and the elderly) will be objectively measurable criteria for evaluating public space in residential areas, particularly regarding the ability of responses to the needs and requirements pertaining to specific age groups.
The human component that characterizes the proposed method highlights the needs and expectations taking into account the prevalence phase of the life course marked out by aging.
For this purpose, one must define the type of elderly profile, seeking their active and early stages of prevalence (dementia and degeneration), to enable the identification of requirements and objective factors enhancers of active aging, promoters of quality of life and also providing quality to public spaces in residential areas.

The relevance for the conference theme

In this sense, it's important to retain international good practice for urban design in residential areas, (described on the state of the art), along with the WHO guidelines in conjunction with the standard language defined in the CIF[3], as an universal lexicon for urban design - Classification International of Urban Design (CI-DU), which should be associated with an educational program (e-DUcar) disclosed by various media and social networks. Moreover it can even be a component of the education sector (adaptable to different levels), because it's directly designed to promote the culture of fundamental principles, citizenship and prevention.

The background

To suppress the abstraction of certain factors inherent to the human dimensions of public space, the exhaustive study of the rights, needs and "common" prevalences to the status of the elderly as also an integrated analysis with models[4] of quality of life will give the evaluation process the measurability needed for the goal of active aging and quality of public space in residential areas.

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[1] Jackie Brown, Ann Bowling, Terry Flynn. Models of Quality of Life: A Taxonomy, Overview and Systematic Review of the Literature. May, 2004.

[2] Source: Global Guide: Ageing Friendly Cities, WHO 2008. Introduction, p.7.

[3] CIF - Classification International of functioning, disability and health, accepted by 191 countries as the new international standard for describing and assessing the health and disability, classifying functioning, disability and health of human beings in the world, establishing a common language to describe the health states associated with it. Source: Portuguese Association for the Handicapped, http://www.pcd.pt/apd/claint.php, 13/03/2012.

[4] According to Brown, Bowling and Flynn (2004) Quality of life (QoL) is a multi-level concept and popular as the final stage in the evaluation of public policies (outcomes of health care and social). Given the infinity of research on objective and subjective indicators of quality of life, and difficulty in obtaining a measuring instrument they systematized a taxonomy of models of quality of life: **Objective Indicators** (standard of living, health and longevity, housing and neighborhood characteristics); **Subjective indicators** (life satisfaction and psychological well-being, moral, personal fulfillment, happiness) **Satisfaction of Human Needs** (objective circumstances - security, housing, food, heat - opportunities for self-realization, the theory of human needs - physiological, safety, and social belonging, ego, status, self-esteem), **Psychological Models** (personal growth, cognitive ability, efficiency and adaptability, level of independence, dignity perceived, social competence, control,

The classification by functional criteria of dimension, location and context, will allow a careful analysis of the methodology inherent in the process of inclusive urban design for the particular case of the elderly.

The correlation of different dimensions of space (economic, social, cultural and socio-cognitive), will clarify a broader level intrinsic in the methodology of urban design as a discipline, since it imposes the demand for new times framed in Global Guide of WHO, in which predictions about the disproportion between the number of children and seniors confirms the progressive increase of the 'number of residents aged 60 years or more' in cities.

The exponential ageing of the global society is alarming considering that the number of people over 60 will double between 2006 and 2050 in proportion of 11% to 22%, exceeding the number of children (aged 0-14 years) in the population.

Inherent to the data gathered we can consider the concept of the elderly people as a resource, and the age-friendly city. The WHO maintains that: the first concept is defined by active ageing as '*a process of life shaped by several factors, alone or together, favor health, participation and security of seniors.*' (WHO, 2010), preceded by the second approach of '*mobilize cities to become more age-friendly, in order to enjoy the potential that older people represent for humanity.*' (WHO, 2010), in which the final goal lead at the beginning: '*An ageing friendly city encourages the active ageing by optimizing opportunities for health, participation and security, to increase the quality of life as people age.* '(WHO, 2010)

However, the city should go beyond the adaptation of its structures and services, since (socio) cognitive dimension will allow that at the level of urban design principles define the public space to assume the role of promoting active living seniors, suitable different needs and degrees of capacity in terms of limitations, constraints and adaptation in relation to other groups that shape society.

Thus, the urban public space as an interrelation of generations field is the stage where the personal / individual interacts with the group / collective (in) directly and expose each individual to different levels of current conflict and adversity, commonly identified, analyzed and graded such as insecurity, discomfort and exclusion, particularly compounded with dementia[5] and degeneration of biological condition.

Methodology

The facts give rise to a progressive concern not only economic but also social, which becomes denser in urban areas[6], particularly in cities and urban centers with economic importance and / or geographic location in the coastal territory, and it is vital that the public space meets its mission / function by means of a comprehensive urban design, promoting the concept of public space as a "place of ageing," which impels to the act of leaving, moving out of (private / home) in public spaces is an important health promotion activities for older adults (Peace, Holland, & Kellaher, 2005, p. 200).Associated with the concept of UrbAging, will frame the methodological structure of the factor analysis (in) adaptation of the elderly for various reasons, cultural, economic, among others, given the evolution of global society driven by the dynamics of the digital world, which increasingly it depends, driven by economic policies that conflict with the social evolution capacity.

The timeliness of the issue requires a thorough study of urban design, to the scale of urban public space in residential areas, envisioning an investment in a structured methodology supported by measurable elements with effective contributions to a society that increasingly moves away from the nuclear family[7], to provide quality of life of the senior's citizens group drives to think the urban public space going beyond the mere normative question concerning accessibility, which in the case of Portugal was most relevant obtained with the publication of Decree Law n.º 163/2006 of 26 August.

The relevance of the theme is more evident given the cause-effect relationship with the economic sphere that serves the political orientations of governments, and not only restricted to local (country), since the elderly, along with the children and the disabled[8], portray society groups composed of individuals in non-productive phases of life and dependent, where the elderly appears as beneficiaries of pensions and retirement, or are a source of spending translated by health and social supports.

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autonomy, self-efficacy or self-mastery and optimism-pessimism), **Models of Health and Functioning** (broader measures of health status, depression scales and scales of physical ability); **Social Model of Health** (indicators of social support networks and activities, integration into the local community), **Social Capital and Social Cohesion** (social, environmental and neighborhood, and resources); **Environmental Models** (place of residence and the importance of designing enabling internal and external environments in order to promote independence and social participation of people active older - the area of gerontology covers environmental psychology, geography, architecture, health and social care, and related disciplines.), **Ideographic** (values, interpretations and perceptions, satisfaction with their position, circumstances and priorities in life).

[5] Burton E and Mitchell L (2005). An investigation into the accessibility of web-based information for people with dementia.

[6] The finding that, according to WHO (2008), "our world is a growing city", where in 2007 more than half the world population lives in cities, and the number of mega-cities increased tenfold over the twentieth century, from 2 to 20, corresponding to 9% of the world's urban population in 2005, and in cities with less than five million inhabitants, the proportion of urban population will continue to increase in coming decades, and the prediction that by 2030, "about three in five people in the world dwell in cities and the number of urban population in less developed regions will be almost four times higher than in more developed regions."
(consider mega-cities the cities with at least 10 million people (WHO, 2008).

[7] Understood nuclear family, as the family structured by Mother / Father / Son, characteristic of the industrial age, reflecting a broad concept that includes primarily traditional families, nuclear, single parent, plurals, adoptive, host, that populate nursery schools, kindergartens and centers for leisure, retirement homes and daily centers.

[8] "An age-friendly city is also a child-friendly city, as of the disable, and of all citizens". Source: http://www.associacaoamigosdagrandeidade.com/cidades-amigas-dos-idosos/

The research will reach:

- An approach to the elderly people health and needs driven by an urban design practice for residential areas.

- Definition to an universal lexicon for urban design - Classification International of Urban Design (CI-DU).

- Establish an educational program (e-DUcar) as a component for education to promote active ageing culture.

Innovation and key results of the paper

In conclusion, the application of the concept INCLUSIVE allow to explore the different dimensions in the field of public space, with particular interest in the possibility of inducing a healthy lifestyle, enhancers of social and emotional, a close relationship through shared experiences that allow learning to live with the new stadium outside the labor market, illness or disability.

In the gerontology field, there are more and more elderly people with full health and gaiety coming into break with himself for not being able to fit with the retirement, loneliness, among other factors, indicating a limitation inherent in the concept of the formal division of the age's groups, i.e. 3rd age senior citizens shall constitute, in fact, the fourth age stage, which is now the primary promoter of self-sustainability of its business in full co-relation with the active level of society, verified by increasing number of retirees who are directing their momentum to undertake activities other than those who exercised, acting with freedom of action, and no longer dependent of a work to live.

Fitting the concept, is important to associate the affective realm that underlies individual from childhood to old age, that define their relational and security fields, and the sensory relationship of elderly with the external environment and consequent ambivalent suitability which response to ageing process.

Keywords:

urban design in residential areas; inclusive public space; home zoning; age-friendly cities; active aging; quality of life.

Accessibility plans in response to the needs of the elderly

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Abstract

Urban centres are currently at the intersection point of several simultaneous challenges. Uncontrolled urban growth, population aging, urban degradation, and a quest for better quality of life, among others, are intertwined phenomena, affecting and restricting the room for action of planners and urban authorities. Here, quality of life must be understood beyond the access to basic elements, into areas of social and civic engagement, forging the path into a more complete urban experience. This means the ability to plan, design and transform urban space in order to be useable by all.

The walkable city has been gathering growing support by urban authorities, in par with the on-going environmental concerns and a broader process of inner-city decay. By connecting the physical features of the urban environment with the effects over its population, the terms of architectural disability and environmental pressure emerge as a way to connect the cause with its effects. Home zones are another phenomenon that developed together with concerns over livelier and safer urban environments. Still regarding the more physical aspects, universal design, inclusive design, or design for all, are some of the most important terms which were developed in order to guide a new focus into a urban design which sought solutions for all citizens, regardless of their age, gender or origin. If urban environments are made to take into consideration the needs of all, including the elderly, then it is expected that they will also be more comfortable to the overall population. This is where the link with age-friendly cities is formed. Although there has been a growing interest in urban solutions to cope with the needs of the elderly, few have engaged in the creation of integrated approaches, mainly at the aggregation and creation of strategies and approaches. Elderly physical and mental decline are serious issues that, if not addressed thoroughly, severely impact their independency and promote an escape from the 'outside' urban environment.

The urban planning process is much more than plan-making, as it involves a strong interaction between social, political and economic spheres. As a result, urban zoning plans seem clearly insufficient to cope with the extensive urban dynamics, as they only define major land use types and infrastructure networks. Therefore, they fail by not providing guidelines at any socio-economic level. A new kind of instrument is therefore necessary in order to fill this gap, where the figure of the accessibility plan enters into consideration. By framing its scope into three main areas – urban, social and operational/technological – it is then possible to evaluate the suitability of a plan of this nature to the promotion of a more inclusive urban environment.

The results will show whether the accessibility plans can effectively fill the void in urban strategies towards a creation of a comprehensive instrument in order to create not only more age friendly cities but also to solve the problems of other citizens with mobility impairments.

Keywords: accessibility plan, inclusive design, age-friendly cities, urban strategy, planning instrument

Urban Accessibility and Planning in an aging society

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Abstract

All citizens have the right to feel part and participate in society, and in this sense physical mobility is often a necessary condition for inclusion. Nevertheless, not everyone can easily access spatially disperse opportunities nor transport which enable access to these opportunities. Accessibility concepts are increasingly acknowledged as fundamental to understand the functioning of cities and urban regions (Bertolini, 2007; Bertolini, Le Clercq & Kapoen, 2005). In particular, accessibility instruments are able to provide a framework for understanding the reciprocal relationships between land use and mobility (Curtis & Scheurer, 2010). Such a framework has an important potential added value for urban planning practice. However, accessibility is yet sidelined in urban planning, in particular in land use planning and furthermore in formal municipal plans.

This paper discusses the role of the formal planning system, with a focus on municipal plans, in providing accessibility conditions to all, considering the growing importance of this issue within aging societies. This discussion focuses on the Portuguese planning system, in particular on the role of municipal plans in producing accessible cities. The research starts with the review of the European context for accessibility planning, followed by a review of national directives for accessibility planning in master plans. This paper also presents a review of the Portuguese planning practice and on how accessibility concepts have been put into practice through municipal plans. This discussion is based on a review of a number of Municipal Plans identifying accessibility planning objectives and operational directives.

This research shows a clear contrast between accessibility concerns and directive and current planning practice, revealing the limited role accessibility still has in current Portuguese planning practice. The paper will discuss the importance of this role focusing on the instruments currently available to municipal plans to operationalize accessibility planning within the current regulatory regime. Finally the paper will highlight the jeopardies of current practice within aging societies.

Keywords:

Accessibility Planning, Planning Instruments, Municipal Plans

The aging problem of Russia European part's major cities (Volgograd)

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Demographic aging is a widespread phenomenon as it can be noted in almost all the countries in the world. Being a deep process, it has a significant impact on the various aspects of the society life. Demographic aging in the XX century got the status of an acute problem, having an unprecedented scale, which has no analogues in the mankind history.

The structure of this problem is very complex. Its cause and effect ties are polyhedral and finding the best, fastest solution is very difficult.

What is an aging city? What is an aging city in Russia?

It is difficult to determine the basic characteristics of Russian aging city, where 73.7% of the population lives in towns and cities, and the intellectual level of the population (people with higher education) is 27.5 million (Russia's population - 142.9 million). The complexity of determining an aging city in Russia is associated primarily with the general level of socio-economic development, political priorities directly dependent on the areas' resource potential of the country.

In our point of view, in Russia cities aging process is directly and indirectly dependent on the socio-economic conditions of individual regions.

For example, the cities of the Urals and Siberia are located in the oil production area, are being actively developed nowadays and have a definite perspective, population growth. At the same time the cities of Central Russia are characterized by an increase in the number of old people and low population growth. The cities, located in Western Siberia, we call them the oil cities - Kagalim, Langepas, Hanta-Manssiysk, Surgut, are distinguished with a high level of the urban environment, the intensive residential buildings construction, developed transport infrastructure, a large number of community facilities for public use. These are examples of Russia's cities at strategic and economic zones, but that the main population lives in its Central European part. All the largest cities are concentrated here, and this part of Russia and especially its southern part (South Federal District - SFD) is most favorable for a comfortable living due to its natural and climatic conditions in comparison with Western Siberia and the Urals.

In this way the main issue is studying the problems of historical agglomerations of Central Russia and their centers – the cities with population of 1 to 3 million people. Here we can observe the processes of aging, may not aging of the whole city, but its parts, such as city center, the waterfront territory, the territory of the oldness and degrading residential development of the socialist period, transport communications. The major cities of Central Russia and the processes occurring there are the mirror of Russian socio-economic and political changes. These cities are characterized by a lower quality of living comparing to Moscow and the oil production regions. Such cities of the Russia Central European part are characterized by low levels of the urban environment, the low level of social security, low level of residential construction and public facilities. These symptoms reflect the real situation of socio-economic processes in the whole country.

Denial of the city's aging is impossible. Favorable social situation is becoming more dependent on the level of an elderly population comfort living. Creation of age-friendly environment for low mobile citizens in the age category "above 60 years" will contribute to the sustainable urban environment throughout the city.

Thus, implementation of architectural and urban activities should be carried out with regard to the needs of elderly people.

According to the example of Russian one of the major industrial centers - Volgograd, we show the main weak points of urban development – of the city with a unique linear-segmented structure, not only in the perspective of the population demographic aging, but also in the perspective of the city parts fabric aging because of ill-conceived urban policy during the socialist period, and because of the prolonged transition period nowadays, burdened by bureaucratic hurdles and corruption, the lack of a clear understanding of the legal urban regulation processes.

In Volgograd can be noticed no real activities aimed at creating of friendly environment for low mobile (old age) groups. The vast marginal areas, the lack of recreational spaces, accessible to all the categories of citizens, the lack of available developed transport infrastructure - all this leads to the great risk of social isolation, which elderly are exposed.

As architects, working to create comfortable living conditions for all the mankind, we must consider the problem of cities demographic aging and the way of its solution (Volgograd, Russia)

Keywords: Major cities aging, socio-economic conditions, age-friendly urban environment, social security, residential construction, public facilities, low mobile citizens

Promoting sustainable mobility behaviours, local physical environment factors: the case of FEUP' students

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Urban passenger mobility has undergone considerable changes under the last decades. Recent awareness of climate change and gasoline price crisis has motivated the current debate about mobility patterns. Students and ageing people, for their characteristics, represent potential main users of alternative modes from cars. Travel patterns based on private car are more harmful to the environment, not only due to high fossil fuel consumption per passenger, but also for the noise, the air pollution and the high rate of soil consumption and finally, because short travels are the most polluting per kilometer traveled.

In this scope, the study of college students' mobility is particularly relevant, because universities are not only major traffic generators but also privileged places to communicate the values of sustainable travel behavior. Finding strategies to promote more sustainable mobility patterns are relevant to other environments such as shopping malls, sciences parks and hospitals.

The purpose of this paper is to characterize the mobility patterns of university students and to identify the main attributes of local physical environment that influence those patterns, considering its relevance when studying mobility patterns on what concerns to ageing people. Promoting well informed students with sustainable mobility behaviours should not only contribute on the development of the last but also make them play a determinant role in it, as they are the future ageing people.

Data was collected trough personal questionnaires and field observations, on commuting patterns, individual factors, modal factors and local physical environmental factors. In the last ones we included 1) distance, 2) public transport network, 3) residential density, 4) sidewalk and equipments availability, 5) highways availability 6) walking and cycling paths and 7) students' home accessibility. Participants were a representative sample of students (N = 394) from the Faculty of Engineering of the University of Porto (FEUP) in Porto, Portugal. This way, we could observe that the mobility patterns of FEUP's students tended to be unsustainable, due to the high propensity for the use of individual transportation. The results reveal that people who normally use public transport on their commuting most of the times combine it with other modes. Furthermore, our study also reveals that people who use active commuting (walking or biking) or public transportation are more sensitive to local physical environment. It also revealed that home-college proximity and an extensive public transport network with low fares are conditions capable of promoting more sustainable mobility behaviors.

In fact, for short distance trips between home and college, our students prefer to travel by foot or bicycle (N=126, 46%). Students who travel on foot or bicycle spend less time in their commuting than cars users (z=-4,430; p=0,000) or public transport (z=-7,452; p=0,000) (SD=5,8; N=75; min.= 5 minutes and max=30 minutes). Regarding the travel options for longer distance house-college trips, our study reveals a different scenario: the preferred transport mode is generally the car (N=394, 48%, 30% travel by car alone, while and 18% rideshare). The data obtained in our study show that, when compared to other motorized modes, private car is the fastest (z=-5,165, p=0,000) and the most expensive one (z=-4,862, p=0,000). However in residential areas with high density and with access to a wide public transport network with direct routes to the destination students use collective modes (public transports) more often (N=61, 50,8%).

The results give us new insights on promoting sustainable mobility behaviors, suggesting that distance, density and students' home accessibility are major factors in such process.

Promoting inclusive solutions, where these two major groups of public transports users (students and ageing people) are considered and related, would have not only functional and economical benefits but also and potentially social ones. We should not forget that Portugal has an old population where social inclusion solutions should be preferred. In this scope, the study of FEUP college students' mobility is particularly relevant, because students and ageing people share the same physical space to commute to FEUP and Hospital Sao Joao and other related equipments. In this context, we consider that the measures aiming to increase the attractiveness of public transport must necessarily consider the reduction and reliability of perceptive time through the design of bus lanes, real-time information at bus stops and giving new tolls and activities to use during the time trip. Another powerful tool is that active commuting (walking or biking) offers individuals a potential strategy to integrate the recommended amount of physical activity into daily-life routines, the health benefits of active commuting have also been identified, including significant improvements in cholesterol and reduced risk of obesity, cardiovascular disease, stroke, and all-cause mortality.

In conclusion, we consider that it is essential to find answers to the current problems of displacement of students, in order to promote sustainable mobility, and that such process could be enriched and much more advantageous if ageing people would be considered in its development, as our results on the students' mobility patterns show that it is possible to increase the use of public transport and non-motorized modes, if certain conditions are achieved.

Keywords: Active modes; ageing people; local physical environment; physical activity; Porto; sustainable mobility; university students

Communities - Tools and Approaches

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Bicycles and ageing communities

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The growing need of changes in mobility patterns turns public transportation, bicycle and pedestrian mode the solution to reduce the externalities related to mobility, in particular the consequences of the mass use of fossil fuels and the excessive occupation of public space by private cars.
Likewise the growing price of the fossil fuels leads people to search for cheaper transportation modes.
Apart from its minimal ecological impact and the reduction of energy dependence, bicycle has also certain benefits for cyclists such as improving health and costing very little, within some travel time gains for short distances in urban spaces.

This transport mode is one of those that can be used by older people in safety conditions and almost with no age limit.
In fact there is no age at which cycling stops being an option, and cycling can improve life expectancy. Regular exercise can reduce stress, depression and health problems, more common at older ages, and cycling is a particularly low impact activity, requiring no special physical skills. Anyone at any age can do it.
Our cities are not adapted to bicycles and the need for good cycling paths and good connection between transport modes are essential in order to improve this transport mode which is environmentally friendly, adaptable to all ages, easy to use and park, feasible and pleasant for short trip distances.
Cycling can also be a very cheap form of transport for anyone on any budget. It gets you from A to B at virtually no cost, whenever people want to go. No waiting for lifts from other people: no reliance on buses.
However it can be combined with buses, using bike sharing systems, for example, helping older people to make the distance between bus stop and their home or the supermarket.
Several cities around the world adopted public bicycle sharing systems that allow to pick up and to drop off a bicycle in different stations throughout an urban area.
The bicycle sharing systems is a complementary mode of others transportation modes in an urban area – intermodality.

These transportation intermodality answers to the problems associated with cycling including travelling larger distances or ascending slopes, carrying loads or being subject to weather conditions.
The work will develop an aid decision method to implement an intermodal stations in urban areas, in other words it will provide a methodology to locate bike sharing stations in urban areas according the complementary sustainable transportation modes, public transportation and pedestrians.
Electric bike sharing systems can be easily used by people with special needs for mobility, namely in order to overcame difficulties such as slopes, in which older people are of course included.

At planning level the efforts for organizing the systems are the same, with or without electric bicycles.
The methodology will define the optimum location of bike sharing stations considering the pedestrian modes and the public transportation service in different scenarios: minimizing the changes required in TP service, and optimizing and adapting public transportation services (stations locations and frequency). Also considering possible accessibility indicators changes and ensuring the economic viability of the system.
The demand of older people for this system is one essential variable to be consider since older people are the main users of public transport systems (and, by the way, of the public space itself), apart from rush hours. To ensure that older people can use it is certainly one of the conditions to ensure the economical viability of the system now and more and more in the future.

It will be considered instruments of intermodal logistics and it will be completed with a micro-simulation approach to understand how the model will work in the real situations considering behavior variability amongst potential users'.

The methodology will consider also the need of bicycle infrastructure construction by suggesting cycle track construction to serve the existing demand and according to street characteristics, which guaranties the security and comfort of cycling.
Besides the articulation between Public Transport and Bicycles, this bicycle infrastructure must be guarantee. This is also an advantage to more restrictive needs of mobility from older people. People that needs to move in

a wheelchair can take advantage of an urban space adapted to two wheels, namely on crossing points, one of the headaches of the wheel chair user.

The work to develop will correspond to decision support instrument for sustainable urban accessibility, which main objective is the maximization of distance traveled in bicycle in urban areas, giving a special treatment to needs for travelling of older people.

Keywords: TOD, ageing, policies