

Chapter 2

Approaches to Environmental Gerontology in the Mediterranean Europe and Latin America: Policy and Practice on Ageing and Place

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2.1 Introduction

Over the course of history we have never before managed to live so long. This has made ageing population a widespread and central theme, which, in the twenty-first century, poses serious challenges to researchers, practitioners and the governments in the developed regions, such as Europe, and developing regions, such as Latin America.

Ageing is a slow and dynamic process that lasts a lifetime, determined by internal factors such as genes, and external factors such as the physical and social environment (Matteson 1997). In past decades, the secret of longevity was primarily attributed to genetic factors (Risch 1990; Bezrukov and Foigt 2005), however today different researchers have found that environmental factors have an increasingly relevant weight in prolonging human life and, above all, the quality of life of the elderly (Dychtwald 1986; Fetter et al. 2012). This change in the perspective on ageing is the result of developments in research into geriatrics and, particularly, gerontology, which has moved forward from traditional approaches, based on biological decline, towards a new multidimensional and multidirectional approach¹

¹Ageing is a multidimensional and multidirectional process which is experienced through differences in the pace and direction of change (gains and losses) of the different characteristics of the individual (WHO 1998).

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where the environment becomes a key factor in determining healthy and active ageing² (Wahl 2001; WHO 2002).

In the 1960s the progress of studies on the relationship between the environment and the elderly gave rise to a branch of gerontology—environmental gerontology—the development of which was particularly significant in the English-speaking world, particularly the US, the UK, Germany, Canada, Sweden and Australia (Wahl and Weisman 2003).

However, the applicability of theoretical models developed in the English-speaking cultural environment poses certain imbalances with regard to other sociocultural ageing environments, such as Mediterranean Europe and Latin America. This important premise was the origin of this work, which aims to reflect on the key environmental implications of ageing populations in Mediterranean Europe and Latin America from the viewpoint of environmental gerontology. Furthermore, the marked differences in these two regions: Mediterranean Europe—a demographically aged region with a high standard of social development—and Latin America, currently in the process of demographic transition, and characterized by social inequality, enables us to visualize the heterogeneous landscape that researchers face in this branch of gerontology.

This chapter is an approach to the epistemological and methodological development of environmental gerontology, paying particular attention to prospects for research in Mediterranean Europe and Latin America. The methodology was based on a review of the international literature through databases of indexed journals, such as Thomson Reuters and Scopus. The results indicate that the applicability of the theoretical models in environmental gerontology poses certain imbalances in heterogeneous spaces. Also, in both regions it is seen that a predominant proportion of research has focussed on the social environment associated mainly with health, with scant attention paid to analysing the physical environment (man-made and natural), which hinders a comprehensive understanding of the physical and social environment which is essential to promote ageing in place. We also see an uneven depth of research, particularly in Latin America, as well as the need to further discuss its epistemological and methodological tools in order to make them more applicable to heterogeneous ageing environments, and design public policies focussed on improving quality of life for the elderly.

2.2 Epistemological and Methodological Approaches to Environmental Gerontology

In the last stage of the lifecycle people share similar biological characteristics. However, the ageing process is experienced unequally in different physical and social contexts³ (Golant 1986). With this premise, different social and health

²The term “active ageing” is the process of optimizing opportunities for health, involvement and security, in order to enhance quality of life as people age (WHO 2002).

³The objective dimensions of the physical environment refer to everything that is outside the skin; which is inanimate and that can be measured in centimetres, grams or seconds. Thus, the subjective

researchers are gradually building up a theoretical body of knowledge on environmental gerontology, a multidisciplinary field which presents major theoretical and methodological challenges in the twenty-first century, although this is not immune to criticism.

The development of environmental gerontology—and of gerontology in general—has been characterized by the increasing development of multidisciplinary and interdisciplinary research into ageing (Hagan-Henness and Walker 2011), as well as by the changes associated with different professional and governmental interests at any given time. The early 1920s saw the first approaches to studying the environment and population, tackled from the standpoint of urban sociology and social psychology (Hellpach 1924; Bechtel and Churchman 2002). In the early 1930s various studies warned of a paradigm shift in ageing and, in general, in gerontology, from physiological perspectives to more comprehensive and complex views, seen from an environmental standpoint (Wahl and Gitlin 2007). Also, since the 1960s the contributions of various social sciences, such as environmental psychology (Stokols 1978; Lawton 1985; Spencer and Blades 1986) and geography⁴ (Rowles 1978, 1993; Warnes and Law 1984; Smith 1991; Walmsley and Lewis 2014), have brought to light a new branch of gerontology: environmental gerontology, which aims to understand, analyse, modify and optimize the relationship between the person who is ageing and their physical and social surrounding,⁵ from a multidisciplinary and interdisciplinary standpoint⁶ (Wahl and Weisman 2003; Wahl and Gitlin 2007). Indeed, during these years some governments, such as the US, have run residential programmes and housing for the elderly, coupled with support for the studies on environment and ageing. Thus, in the 1960s and 1970s researchers were interested in assessing the decisive influence of the environment on the capabilities of the elderly (Lawton and Nahemow 1973), focusing on the design of buildings and particularly institutionalized buildings such as old people's homes.

This context made the 1970s and 1980s very prolific as regards the development of environmental gerontology, through the formulation of different theories (Altman

dimensions of the social environment are associated with the range of operational processes experienced by a person as they age, forming cognitive and affective bonds with their physical-spatial environments (Lawton 1999).

⁴Warnes (1990) notes that geographical research should contribute to the development of gerontology through the study of spatial and time-based variations in elderly person-environment relations, and facilitate research on the socio-spatial implications of population ageing which is essential in planning and public policy.

⁵The term “*physical and social surroundings*” derived from environmental psychology, expresses the complexity of the environment and its physical and social relationships with people who are ageing. Thus, the socio-ecological model of ageing (Moos and Lemke 1985) suggests that physical and social environments influence individual behaviour and viceversa.

⁶This area of knowledge includes different disciplines, such as psychology, geography, town planning, architecture, engineering, design, health sciences, social work, occupational therapy, sociology, anthropology and other related sciences (Rowles and Bernard 2013; Scheidt and Schwarz 2013).

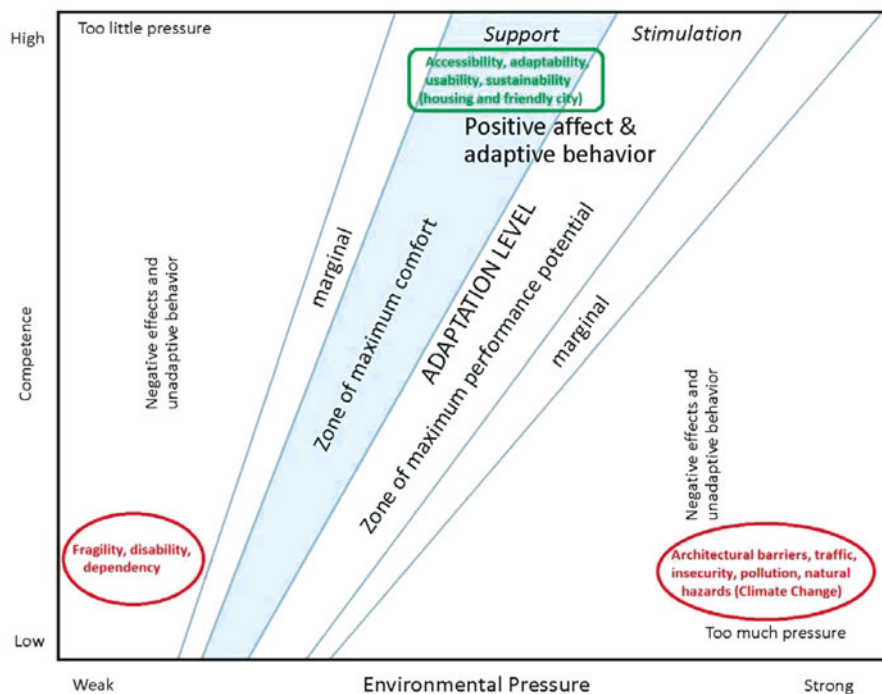


Fig. 2.1 Ecological model of ageing (Source: Adapted from Lawton and Nahemow (1973), by authors)

et al. 1984; Pastalan and Schwarz 2001), such as the ecological model of ageing⁷ (Fig. 2.1) and the hypothesis of environmental docility⁸ (Brody et al. 1971; Lawton and Nahemow 1973). These theories will have a broad impact on subsequent research into the analysis of individual-environment relationships, such as the correlation between the type of home and residential satisfaction (Lawton 1980; Galster 1987), and between the characteristics of neighbourhood and the lifestyles of the elderly (Lawton et al. 1984; Satariano 2006). However, the ecological model of ageing (Lawton and Nahemow 1973) will be criticized for its determinism,⁹ reductionism (housing and old people's home, excluding other environments), and positivist approach (Golant 2003; Wahl and Weisman 2003; Schwarz 2012).

⁷The ecological model of ageing formulates that behaviour depends on the competence of the elderly person and the environmental pressure to which they are exposed. The psychologist, Kurt Lewin (1951), was a pioneer in explaining living space as a function determined by the individual and their environment.

⁸The environmental docility hypothesis establishes that population ageing implies a gradual reduction in abilities, which means fewer skills to deal with environmental pressures.

⁹Determinism lies in associating ageing with a process of increasing passivity, which serves to hinder the ability to cope with environmental pressures.

The stereotypical image of the elderly as passive and dependent, with lives determined by their surroundings, has been discredited by environmental gerontology, which has found that during ageing high levels of activity and productivity can be maintained, both to manage their adaptation to the physical and social environment, and to provide assistance and collaborate altruistically in society. In this direction, alternative theoretical models have emerged, based on the concepts of adaptation¹⁰ and adjustment,¹¹ such as models of person-environment congruence¹² (Kahana 1982) and complementary congruence¹³ (Carp and Carp 1984). Thus, motivation is proposed as a possible explanatory factor of the relation between the elderly and their environment (Kahana 1982; Carp and Carp 1982, 1984).

Subsequent research has showed that the elderly can choose, create and adapt environments to their needs, reducing certain environmental pressure, thus formulating the hypothesis of environmental proactivity (Lawton 1989, 1990), which states that ageing individuals can act as agents of change in their own environments and therefore, a two-way relationship is recognized between the elderly and the environment (Fig. 2.2). In turn, an elderly person is determined by three basic functions of the environment: maintenance, enabling knowledge, persistence and consistency in the environment through everyday experience, identity and attachment; secondly, stimulation, which promotes adaptive behaviour, reducing or amplifying behavioural problems; and, thirdly, support, which promotes security, orientation and the independence of the elderly.

In turn, different proactive models have been developed, aimed at promoting creative resources to promote successful ageing in place, such as the Baltes and Baltes model (1990) which poses selective optimization of personal resources and finding alternative routes to offset less adaptability to the environment; and the proactive model of preventive and corrective adaptation (Kahana and Kahana 1996),

¹⁰Adaptation is a process of negotiation by which an individual modifies their behaviour patterns and/or characteristics of the environment to adjust to the surroundings where they live, in relation to their own personal abilities. This adaptation is the result of human-environment transactions which are explained on the basis of four categories: responsive (impact of environment on health and user behaviour); interpretive (affective processes and sense of place); evaluative (assessment of the constructed environment and of the attitudes); and operational (action to change the built environment). From the ideas of Stokols (1978), Lawton (1985) states that transactions between the elderly and the environment should be analysed at different levels: macro (national and city context); meso (neighbourhood); and micro (elements inside the home).

¹¹The fit is the level of competence of the individual in certain spheres, given a certain level of environmental pressure.

¹²The person-environment congruence model indicates that behaviour is a function of the congruence between individual characteristics of people and the specific features of the physical and social environment to satisfy these. To better apply congruence in the taxonomic analysis of the environmental characteristics of the neighbourhood, the importance of four physical and two social measurements is highlighted: physical comfort or aesthetics, resource services, security, stimulation or peace of mind, homogeneity or heterogeneity, and interaction or loneliness (Kahana et al. 2003).

¹³The model of complementary congruence explains that the welfare of the elderly is determined by the correspondence between personal needs and the characteristics of the environment.

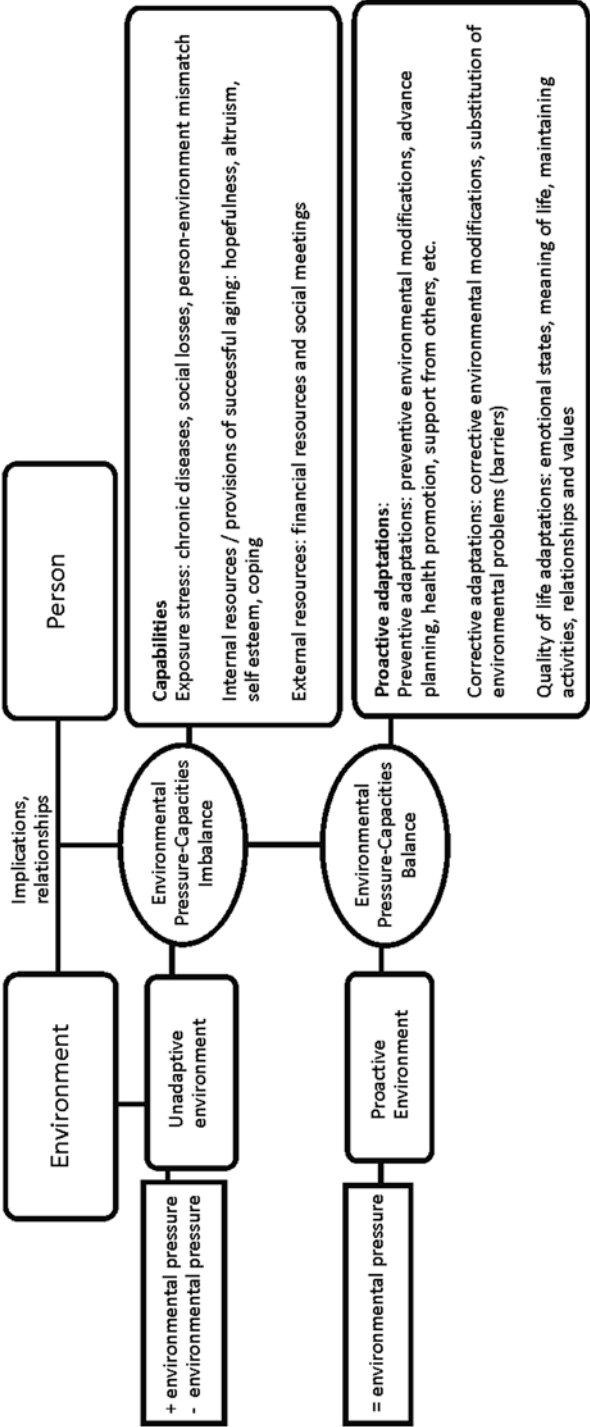


Fig. 2.2 Environmental proactivity (Source: Adapted from Lawton (1989), by authors)

which proposes proactive adaptation which helps to create personal coping resources, such as self-esteem, altruism and life satisfaction, which can be activated in times of stress due to factors such as disease, the loss of skills, and the incongruity between the individual and his environment. In this regard, preventive proactive adaptation constitutes preventive types of behaviour that the elderly can develop to facilitate their adaptation to the physical and social environment, such as promoting health, planning and helping others, while proactive, corrective adjustments are associated with changes in behaviour on a personal level, and with changes in the environment.

Some studies have indicated that the decision of the elderly who own their homes to undertake major refurbishment there is determined by environmental and socio-economic factors, such as the size of the dwelling, its age, location, the cost of refurbishment, income, and the new needs of users to adapt (Culp 2011). In this regard, there has been debate over the limited possibilities of the elderly to alter their environments, for example in the case of those living in rented accommodation (Wahl and Weisman 2003; Bates and Fassenfest 2005; Sánchez-González 2005).

Recent studies show residential relocation could be an alternative to consider, since it develops beneficial adaptive processes in ageing (Litwak and Longino 1987; Rowles et al. 2004). Therefore, there is an insistence on the need to raise awareness of ageing in place, as an individual and above all collective responsibility, which should involve individuals and society at large (Garvin et al. 2012; Pastalan 2013). In this regard, we need to better understand the spatial experience of ageing in place, both linked to the adaptation of buildings, and the implications of the social environment (neighbours, family, society) and the support this can provide to the welfare of the elderly (Cutchin 2003; Sánchez-González 2009a, b; Cramm et al. 2013). Indeed, there has been an increase in qualitative research, in understanding the spatial experiences of the elderly within their relationship of belonging to the physical and social context, and the identity and attachment to their milieu (Rowles and Schoenberg 2002; Wiles et al. 2011; Sánchez-González 2014). Also, the time perspective helps to understand the spatial experiences of the elderly in their everyday environments due to their historical significance (Golant 2003), and an understanding of these is becoming possible thanks to longitudinal studies and an ethnographical approach, such as life stories and photo stimulation (Garvin et al. 2012).

The studies have used environmental dimensions, determined by their attributes and functions, as well as space-time scales of observation. However, in environmental gerontology findings are still inconsistent and reflect the methodological difficulties of measuring the built environment (Cunningham and Michael 2004). The most widely studied environmental attributes associated with ageing include comfort, privacy, accessibility, guidance, control, security and dignity (Christenson and Taira 1990; Kahana et al. 2003). Likewise, environmental functions, which can serve as resources for the elderly are maintenance, support and encouragement (Wahl and Gitlin 2007; Davies and James 2011; Kurniawati 2012) (Fig. 2.3). The spectrum of the physical and social environments of ageing has also broadened, with public amenities and the natural environment becoming important in the quality of life of people as they age in place, and analysed at different scales: micro (housing, resi-

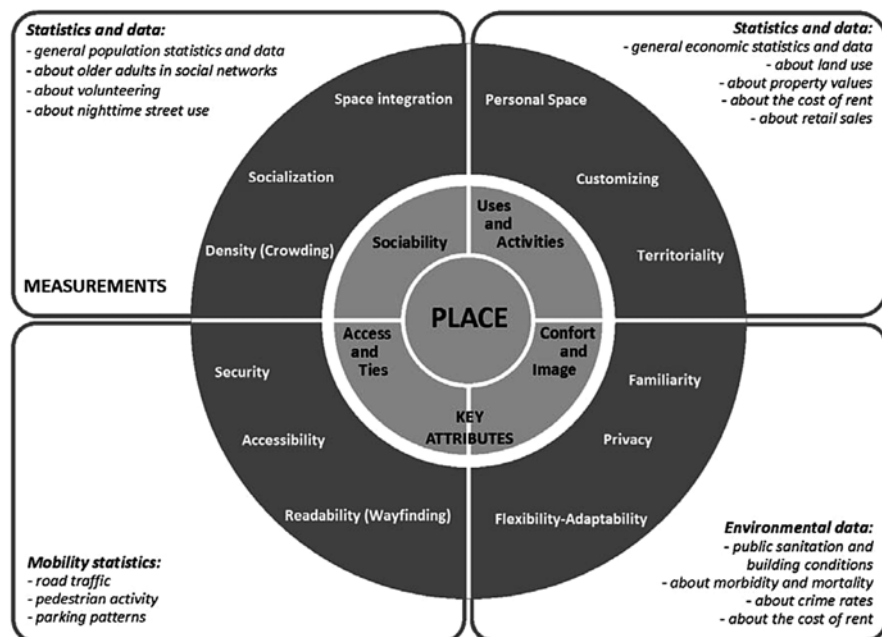


Fig. 2.3 Attributes and functions of the ageing in place (Source: Adapted from Kurniawati (2012), by authors)

dence), meso (neighbourhood) and macro (urban and rural) (Rowles and Chaudhury 2005; Andrews and Phillips 2005; Andrews et al. 2007). In this regard, solutions have been offered for building design, as well as neighbourhood and urban planning proposals, which are essential to promote ageing in place (Lui et al. 2009). This has been approached by analysing the important role of public transport, accessibility and the diversity of buildings and neighbourhoods, without forgetting the importance of providing creative public amenities where the population ages inclusively, along with the rest of the community (OECD 2001, 2003; Scott 2012; Sánchez-González 2005, 2013).

The literature bears out that the increase in life expectancy explains the increase in dependent persons and those who need some assistance to maintain their independence (Pastalan 2013). Since the late 1970s the governments of the developed countries, such as the US and UK, have begun to rethink the economic viability of the institutionalization model for the elderly in nursing homes, given the projected growth in population ageing. In the same vein, various experts advise against residential relocation for the elderly, and are inclined to promote ageing in place (home and neighbourhood), considering that the everyday environment contributes to the independence and overall quality of life of the elderly, including that of frail and dependent people (Rowles 1993). To do this, attention is starting to be paid to the physical building environment, since it has been found that relocation increases among the elderly who experience deteriorating health associated to environmental

hazards, such as falls due to architectural barriers (Stoeckel and Porell 2010). In this sense, there is an institutional impulse to develop policies aimed at promoting ageing in place, through better design of the residential and private environments, as well as supporting housing alterations and the inclusion of local services oriented to caring for and satisfying elderly users (Gitlin 2003; Bookman 2008; Vasunilashorn et al. 2012). In the same vein, residential models have been developed for the long-term care of elderly dependents, based on combining designs of specially adapted housing and social support services, such as computer-based healthcare, which both optimize private living areas for ageing communities, such as access to public amenities for social and recreational activities (Christenson and Taira 1990; Schwarz and Brent 1999). To contribute to ageing in place, different environments have been designed, adapted and improved, involving multidisciplinary teams comprised of builders, architects, designers, therapists, psychologists, social workers and gerontologists. This has enabled innovative, adapted and intelligent housing designs, where control is exercised over elements ranging from the universal design and removal of architectural barriers to the control of lighting and colour (Taira and Carlson 1999; Nugent and Augusto 2006). Here, the literature emphasizes the importance of the design of environments due to the beneficial implications of environmental stimuli such as light, nature, sounds and virtual reality in improving pain control and, in general, the health of the elderly (Malenbaum et al. 2008).

In ageing, mobility outdoors decreases progressively, particularly among the elderly living alone, increasing the time spent in the same location, home and neighbourhood (Sánchez-González 2005). Here, public amenities are of great importance in active ageing in place (Rodiek and Schwarz 2006; Peace 2013), since they increase daily and collective outdoor activities such as walking, recreation and social relations (Takano et al. 2002; Peace et al. 2006; Rubinstein and Medeiros 2005). Some studies therefore suggest evaluating both issues concerning the accessibility of public places and the satisfaction levels of elderly pedestrians (Wennberg et al. 2007). In the same vein, it is proposed that society should encourage mobility among the elderly, providing good accessibility in public areas to be able to walk independently, as well as facilitating access to public transport (Stjernborg et al. 2014). In addition, accessibility in public amenities is an important issue for the elderly with reduced functional abilities, such as dependents and disabled persons, and it is important to ensure the safety of elderly pedestrians. In fact, the literature confirms that natural environments provide positive changes in the physical well-being of the elderly with dementia, reducing their stress levels. Thus, different researchers analyse the positive relationship between the designs of gardens and parks and the improvement in the quality of life of people with dementia (Rodiek and Schwarz 2013).

Besides, the importance of landscapes has been highlighted, due to its aesthetic and therapeutic value, with regard to the promotion of healthy lifestyles and improving the quality of life of the elderly (Gastaldo et al. 2004).

In recent years environmental gerontology has been discussing the need to improve the quality of the environments where we age, offering new types of buildings and natural environments that are tailored to the individual abilities of the

elderly (Wahl et al. 1999; Pastalan and Schwarz 2013), based on understanding how elderly people experience the different relationships with the environment at different stages of ageing; and how they can manage and optimize the opportunities and limitations of their physical and social environments, through the study of the environment's objective and subjective dimensions. In this regard, different taxonomic analyses of the objective and subjective characteristics of the physical and social environment of ageing are being proposed, which contribute to residential satisfaction and the overall quality of life of the elderly (Carp and Carp 1984; Lawton 1999; Bittencourt et al. 2012). In turn, in the next few years the development of environmental gerontology will be linked to its theoretical, empirical and methodological advances, as well as its applicability in practice, in order to contribute proposals that back public policies aimed at promoting ageing in place.

2.3 Prospects for Research into Environmental Gerontology in Mediterranean Europe

The development of environmental gerontology is linked to the undeniable contribution of demographic, socioeconomic and environmental researchers in English-speaking countries such as the US, Canada, the UK and Germany. Proof of this are the recent compilations of studies on environmental gerontology, taken from multidisciplinary and interdisciplinary standpoints, which include only contributions from certain English-speaking countries, such as the US, Canada, Germany, Sweden, the UK and Ireland (Rowles and Bernard 2013). However, the dominant literature does not clearly reflect the contributions made to this field by researchers from other cultural environments and developing regions, such as Latin America.

This section explores the development and current status of environmental gerontology in Mediterranean Europe¹⁴ (France, Spain, Portugal, Italy and Greece), focusing on the problems of applying the main theories coming from the English-speaking academic world.

In Europe the study of ageing population-related environmental issues has been widely differing, and has been marked by demographic changes and the unequal socio-economic and scientific development of nations. The literature bears out that in Northern European countries such as the UK, Germany and Sweden there is a greater tradition of research and there has been a major boost in environmental gerontology, preceded by an early interest in establishing the implications of the environment on the elderly, while a limited approach to these issues has been seen in Mediterranean European countries, due to the shortage of environmental gerontologists. In fact, as has been corroborated by the results of scientific meetings, in Mediterranean European countries the subjects of ageing as associated with socio-

¹⁴In reviewing the literature we have chosen not to include studies on other countries in Mediterranean Europe with less demographic weight, such as Albania, Croatia, Montenegro, Bosnia-Herzegovina, Malta and Cyprus.

demographic and health issues predominate, linked to the social environment of the elderly (Rodríguez Rodríguez et al. 2012).

With the expected increase in the region's ageing population,¹⁵ in recent years, the European Commission has funded projects such as FUTURAGE (2011),¹⁶ aimed at building consensus over research priorities within ageing for the coming decades. The aforementioned project, involving the collaboration of researchers from different countries,¹⁷ underlines the growing importance of ageing better at home and in community settings, by looking at the status of techniques, methods and emerging fields within environmental gerontology. Despite the enormous interest in this type of project and its valuable contributions, the pre-eminence of issues related to the social environment of ageing over and above those focusing on the physical and constructed environment, both natural and virtual, is somewhat debatable. Also, the absence of new interest in ageing is observed with regard to the diversity of environments, such as climate change, environmental identity and therapy landscapes. Furthermore, we detect a lack of a true interdisciplinary approach, representative of the heterogeneous socio-cultural and geographical settings of the region.

In Mediterranean Europe the development of environmental gerontology has been late and fragmented, with very few studies focussed on this branch of gerontology. Indeed, studies reveal the prevalence of social and health areas, which attempt to determine the quality of life of the elderly (Prieto-Flores et al. 2008), while there has been a limited focus upon the dimensions of the physical and constructed environment of ageing, through the analysis of environmental attributes. This would be explained by the scarcity of environmental gerontologists, resulting in many physical and social determinants (environmental, social and cultural) of daily life remaining unknown, as well as the quality of life of the elderly in general in this region (Sánchez-González 2005; Rojo-Pérez and Fernández-Mayoralas 2011).

At a general level, the literature highlights the studies from France and Spain, and to a lesser extent Italy, Greece and Portugal. Furthermore, the demographic, geographical, sociological and health tradition of ageing has predominated (Parant 2007)—such as the analysis of the spatial distribution of the elderly population in urban and rural environments. Also notable are the contributions to the study of elderly mobility and residential strategies (Abellán García 1999; Bonvalet and Ogg 2008; Nowik and Thalineau 2010), as well as their socio-spatial implications at residential level, and as regards social services and healthcare planning (Boutrand 2009). However, this exploratory nature limits the development of the few studies

¹⁵ It is estimated that between 2008 and 2030 in Europe the population aged 65 and older will increase by 45 % and in 2060 will represent 30 % of the total population (Lanzieri 2011).

¹⁶ Future Group (2011): *FUTURAGE. A Road Map for european ageing research*. Sheffield: The University of Sheffield. www.futurage.group.shef.ac.uk.

¹⁷ The project brings together institutions and researchers from Albania, Austria, Belgium, Bulgaria, Denmark, Spain, Finland, France, Greece, Holland, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Poland, Portugal, the Czech Republic, Romania, Russia, Sweden, Switzerland, Turkey, the UK, Israel, the US and Canada, Japan and Singapore.

on the factors of elderly residential mobility, which help to improve their quality of life (Lardiés 2008). Therefore, this subject needs a closer look, in longitudinal and analytical terms, focusing more on the relationship between the elderly and their adaptation to their physical environment.

Research reveals significant differences in the perception of the elderly's place of residence, depending on whether this is an urban or rural environment. Thus, research confirms that the size of the place of residence remains a structural element of the distribution of the perception of the habitat of the elderly. Few studies have been identified on rural ageing in these countries, with a predominance of local surveys and studies, and omitting analysis of the constructed environment. In fact, surveys show a certain degree of homogeneity in the perception of socioeconomic and health problems in this sector of the population. However, rural areas reveal a certain conformity and growing concern regarding the urbanization of rural environments (Bigot et al. 2001). It has also been indicated that family solidarity and aid for dependency in old age in both rural areas, where families continue to be larger, and also in urban settings, is conditional upon the spatial distribution of family members, associated with distance and linked to migration (Bourdieu et al. 2004). In the same vein, some studies underscore the persistent problems of poverty and social exclusion of the elderly population (Compán and Sánchez-González 2005; Bultez and Gelot 2010), compounded by the global economic crisis, and which have a greater impact on widows, the homeless, immigrants and rural residents. Despite the complexity of ageing in rural areas, recent studies indicate the growing importance of new residential areas for the elderly, located in rural France and characterized by their amplitude, lower density and design, based on criteria adopted by the European Commission on common facilities and services for ageing in place (Brutel and Levy 2012).

In Mediterranean European countries the convergence of the phenomena of demographic ageing and the process of urbanization explains the central attention taken up by the city as a habitat for ageing, both present and future, as well as the need to convert this conflicting and dynamic space into a user-friendly place for the elderly (Pihet 2006; Sánchez-González 2013). Some research conducted in Spanish cities, such as Madrid and Granada, analyses the problems of ageing in urban settings (home and neighbourhood) (López-Jiménez 1993; Sánchez-González 2005). In this regard, it is stated that the habitability of the environmental setting for the elderly is determined by their spatial experience, which relates socioeconomic factors (income, housing conditions, facilities) and factors of spatial subjectivity (proximity to relatives and neighbours, sense of place, rootedness), warning of worsening socio-spatial problems for the elderly in the absence of gerontology planning in cities (Sánchez-González 2009a). In this regard, we note the growing problem of habitability and the inadequacy of the urban setting for the elderly, since their changing needs and desires for accommodation, their immediate environment, and the conditions of the city are left unattended. It has also been noted that the ageing urban population is exposed to natural hazards (heat waves, floods) and anthropogenic hazards (architectural barriers, traffic accidents, violence and pollution) (Bungener 2004; Coupleux 2010).

In the region the concern over a habitat for the ageing is recent, as confirmed by the fact that until the 1990s France did not begin to design more user-friendly and stimulating environments for dependents in the geriatric hospital setting (Guisset and Veyssset 1990). Thus, we have observed that in this country and, in general, in Mediterranean Europe, problems of environmental stress persist among people suffering from Alzheimer, associated with current physical dimensions in nursing units and old people's homes (Ploton and Cropier 2006). Fortunately, in recent years new studies have addressed the problems of accessibility, privacy, lack of safety, and noise in public buildings in order to correct imbalances and facilitate their adaptation to the needs of the elderly (Souchon et al. 2006).

In Mediterranean Europe ageing in place raises important challenges that must be addressed by researchers and governments. Indeed, studies in Italian cities such as Genoa, warn about the demands of adapting homes to the specific needs of the elderly and making survival possible in their neighbourhoods, where they spend most of their lives. The challenge is major, as it is estimated that 20 % of those aged 65 and older are living in conditions of partial or total non-self-sufficiency (Capacci and Mangano 2003). In the same vein, it has been noted that in Spanish cities the elderly face significant difficulties in altering and adapting their environment to their changing needs with age (Sánchez-González 2005). Salgado and Olivera (2005) found that most of the elderly who had suffered a hip fracture, particularly in the home, returned home and had to again face the same environmental pressures, due to their inability to refurbish. Also, in France, the home can become a painful and even fatal place, particularly for the population aged 85 and over, who have a high suicide rate (Balard and Somme 2011).

Unlike English-speaking countries, it is observed that in Mediterranean European countries the elderly have less residential mobility and higher rates of home ownership, as well as more economic and environmental problems when tackling a major home refurbishment. This would be explained by the fact that in Mediterranean culture the home acquires crucial importance in old age. Thus, the importance of satisfaction with the home and neighbourhood is underlined as an extension of the home itself (Rojo-Pérez et al. 2007). Hence, in recent years, the home has become one of the central elements of wellbeing in old age, which has favoured the implementation of a number of different residential alternatives to enable ageing in place (De Guitaut et al. 2005; Argoud 2006; Dehan et al. 2007). In this sense, the new housing policy, aimed at this group of the population, should involve the experience and active participation of the elderly themselves, through planning their everyday environment and the implementation of local initiatives to improve their neighbourhoods and homes (Argoud 2012).

Another discrepancy in the literature concerns the differential climatic factor, linked to the elderly person-environment relationship. Unlike the predominantly cold climates in some English-speaking countries, such as Sweden and Canada, which tend to confine the elderly over the long winter months (Garvin et al. 2012); in Mediterranean climates the predominance of sunny days promotes the culture of being in public places throughout one's entire life—and particularly in old age—and this has not been sufficiently addressed in the literature. Precisely studies

corroborate the importance of neighbourhood characteristics with regard to the welfare and health of the elderly, since these determine both outdoor activities in daily life and independence and social participation (Fernández-Mayoralas et al. 2004; Sánchez-González 2009a, b). In addition, recent educational experiences related to city workshops for the elderly, such as Granada's City Workshop (Taller-Ciudad de Granada), have organized both exercises to propose gerontology-based town planning in their neighbourhoods, and have also contributed to promoting the active participation and empowerment of this sector (Sánchez-González 1998). From this we deduce that the design of user-friendly cities and promoting policies on ageing in place must necessarily involve the active participation of the elderly themselves.

2.4 Prospects for Research into Environmental Gerontology in Latin America

Below are some reflections on the development and current situation of environmental gerontology in Latin America, as well as the problems of applying the theories from English-speaking academic sources.

The Latin American region comprises a wide range of developing countries, which face significant social inequalities, as well as a rapid advance in demographic ageing,¹⁸ particularly, in the twenty-first century (Lloyd-Sherlock 1997). In recent decades studies on ageing population in the region have been conducted from the standpoint of social gerontology (Díaz-Tendero 2011). It has also been observed that environmental gerontology is still a relatively unknown field for a broad spectrum of society, with little impact on academic circles in these countries (Tomasini 2005; Sánchez-González 2007, 2011; Batistoni 2014). In fact, the limited number of published studies is located mainly in Brazil and Mexico, with fewer contributions from other countries. In addition, major Latin American scientific meetings on ageing remain focussed on the social environment of ageing, ignoring the importance of the physical environment and its relationships with the elderly as a conditioning factor of a better quality of life (Sánchez-González 2015).

A review of the literature highlights the importance of addressing the socio-spatial implications of the ageing phenomenon which have not, however, been reflected in the planning and drafting of public policies, aggravating the already insufficient capacity of governments in the region to respond. In this regard, studies on distribution and localization of demographic ageing have revealed their effects on a regional and local (urban-rural) scale (Sánchez-González 2007, 2008), with major consequences for the labour market, pensions, social services and health, and residential issues (Jacomini 1990; Negrete 2003), as well as care for disability,

¹⁸ It is estimated that by 2050, 196 million people aged 60 and older will inhabit the region, while their relative weight will increase from 10.6 to 25.1 % (UN 2013).

dependency and social exclusion (Serrano et al. 2009; Jasso et al. 2011) and creating conditions for living autonomously and in good health (Uchoa et al. 2010).

In recent decades special attention has been paid to studies on reducing urban mobility patterns in ageing, as well as the motivations associated with migration of the elderly population (health, dependency, tourism) and its effects on receiving areas (Rodríguez et al. 1999; Balsan 2005). In the region, research focused on the elderly's residential mobility and strategies are notable for their input as regards the motivations and effects of urban and rural areas (Gomes da Conceição 1997; Hakkert and Guzmán 2004; Capron and González 2010). Additionally, recent studies are beginning to show some of the effects of return migration, as well as the vulnerability of undocumented elderly returnees on the border between Mexico and the US (Chávez and Sánchez-González 2012; Montes de Oca et al. 2013). A bunch of papers are also highlighting the role played by the mobility of foreign retired on the economic, social and political effects within the residential and social structure of certain cities, as well as residential integration/segregation or the mobilization of public policies. Some examples can be seen in Chapala, Los Cabos and San Miguel de Allende, Mexico (Truly 2002; Lizárraga 2010; Schafran and Monkkonen 2011; Rojas et al. 2014), in Cuenca, Ecuador (Bustamante 2012) or in Granada, Nicaragua (Reyes 2011).

The recent Latin American literature on the subject gives us an understanding of the importance of environmental factors in the quality of life of the elderly, from two different viewpoints. On the one hand, studies are emerging which examine the negative or limiting aspects of life in cities, as well as the architectural barriers, isolation, crime and abuse, noise and insomnia (Fadda and Cortés 2009) without neglecting the effects on the elderly of environmental factors such as air pollution in major Latin American cities (Cakmak et al. 2007; Romieu et al. 2012) or flood risks for the elderly living in degraded urban areas of the cities (Castelliano and Lapa 2013). On the other hand, the importance has been borne out of public amenities in social relations and promoting outdoor activities for the elderly, as well as the aesthetic and therapeutic value of the landscape associated with health and residential satisfaction during ageing (Sánchez-González and Adame-Rivera 2014). However, its results are not yet consistent in Latin American countries (Hernández et al. 2010) since hardly any studies have been done in some cities like Bogotá, Colombia or Curitiba, Brazil. Urban infrastructure, such as footpaths or bicycle lanes, have been validated in residential environments that favour physical activity for the elderly (Salvador et al. 2009; Giehl et al. 2012; Gómez et al. 2015), objective indicators that define the building environment for people's lives (Hino et al. 2011; Reis et al. 2013) or objective and subjective indicators which help explain the recreational use of the city for the elderly (Gómez et al. 2010; Parra et al. 2010a, b) in improving their health and quality of life.

Cities and rural areas in Latin American countries are undergoing increasingly speculative processes and marginalization that are triggering progressive environmental deterioration, which adversely affects ageing in place (Formiga and Prieto 2010). The unplanned growth of large cities has transformed the urban environment into a hostile one for ageing (pollution, architectural barriers, traffic accidents,

insecurity), which increases the risk of accidents (falls, hip fractures) (Peixoto et al. 2008) and psychosocial problems (isolation, depression, anxiety) for the elderly (Salas and Sanchez-Gonzalez 2014). For example, as it has been found that in Latin American cities, such as Bahía Blanca (Argentina) and Havana (Cuba), the old town shows high rates of elderly people at risk of social exclusion, who are impoverished, alone and malnourished (Bagnulo and Pizarro 2010; Bello 2013). In fact, these cities have detected that these vulnerable elderly people opt for confinement¹⁹ in their homes, which has negative effects on their quality of life (Mejía et al. 2007; Tapia et al. 2010), as a measure to avoid stressful experiences in the urban environment (crime, falls). In this regard, it has been found that the amount of time confined in the home is associated with a decrease in use of social and health services, increasing the vulnerability and fragility of this group (Palomo et al. 1998). All this confirms that the urban environment is not user-friendly for the elderly, and contributes to increasing the vulnerability of the heterogeneous aged population (differences by cohort and gender), threatened by biological and social processes, such as loss of health and income (Salgado and Wong 2006; Sánchez-González and Egea 2011).

To date, in the region, government-led and private residential solutions offered to the elderly population have been piece-meal and have not solved the growing problem (lack of assessment of residential satisfaction for housing types, existence of impossible ramps, and railings on buildings which isolate residents) (López-Salgado 2006). The overall advance in urban demographic ageing poses major challenges for gerontology planning (Sánchez-González 2007), making cities into areas of special interest to researchers, governments and international organizations. Therefore, some experts (Escudero 2003; Silveira 2003; Tomasini 2005) appeal for more focus on adapting housing and urban areas to promote the elderly's adaptability to the progressive deterioration associated with age. Some proposals from universities establish, firstly, an analytical framework which, among other factors, diagnoses the urban environment for the adult population through personal surveys in the city of Aguascalientes, Mexico; and, secondly, set up a proposal regarding basic elements of urban living space, such as increasing the provision of public amenities, consolidating neighbourhood centres, re-orientating facilities belonging to other age groups to be used by the elderly as the population ages, and providing the elderly involved with the opportunity to consult (Narváez 2012).

With a more general perspective geared towards Latin American countries, proposals have also been drafted to improve environmental conditions in cities. With an international perspective, documents such as the Regional Strategy on Ageing, adopted in 2013 in Santiago de Chile, and the Charter of San José on the rights of the elderly in Latin America and the Caribbean, adopted at the Third Regional Intergovernmental Conference on Ageing in Latin America and the

¹⁹ Some experts (Jacobson 2011) argue that confinement in old age may be related to diseases such as agoraphobia and hypochondria, arguing that these are not only psychological problems but also disorders associated with maladjustment in older people, particularly women, to urban surroundings and the stressful situations that surround them.

Caribbean 2012, are becoming aware of the risks that limit social participation and prevent social exclusion of the elderly population. In many countries, protection of the elderly is contained in charters and specific legislation (Huenchuán 2013). Recognized rights include the physical environment (public amenities, buildings and housing, and transport) where this population resides. Although legislative adaptation of these plans is neither simple nor homogeneous, between 40 and 50 % of countries in the region had drafted plans to improve access to housing and its quality, to provide transport services or special assistance for mobilization or to improve the accessibility of urban space (CELADE 2007). In some cases laws are enacted which are conducive to homeownership or renting; in other cases access to transportation or public amenities, which encourage social inclusion (Huenchuán 2013).

Policies with a global nature have been defined aimed at improving the urban residential environment. In 2005, in Rio de Janeiro, the Global user-friendly Cities Programme was designed along with the elderly (WHO 2007). This programme encourages healthy and active ageing in place, by optimizing opportunities for health, involvement and safety/security, and where the city's physical and social environment should contribute to improving the quality of life of the elderly. Here, attention is paid to the importance of determinants of active ageing, such as outdoor spaces and buildings, transportation, housing, social participation, respect and social inclusion, civic participation and employment, communication and information, and community support and health services. The 33 cities which joined the initial project across the globe include the Latin American cities of La Plata, Rio de Janeiro, San José de Costa Rica, Kingston, Montego Bay, Cancún, Ciudad de México, Mayagüez and Ponce.

Within this legislative development, international and national institutions responsible for public policy on the elderly have recognized the role of civil society in its management and development. For some years now, particularly since the World NGO Forum of the Second World Assembly on Ageing, Madrid, 2002, and the Conference of Brasilia in 2007, the elderly who are organized within associations saw their social function recognized, and were involved in events. The documents drafted at these events fully set out their rights, including those of access to public amenities, free movement around their place of residence, protection of housing, non-creation of physically or socially excluded areas, and social and community involvement. However, there is some disconnection between civic organizations and the elderly population in terms of social commitment to assistance, and their social value is not particularly deeply rooted in this population (Cruz and Pérez 2006). Thus, it has been necessary to move from (institutional) care-based organizations to others, emerging from society itself, with a prospective and proactive vision. These are the organizations, which have been developing their role of care and empowerment in recent years (Morlachetti et al. 2007; Razo 2014). In this direction a major effort is being made in many countries to incorporate the efforts of civil society, and the design of public policies geared towards the elderly population, within their legislation (Viveros 2001; Morlachetti et al. 2007).

In the Latin American literature examined results vary widely from those of studies on English-speaking and Mediterranean European areas as regards property and the cultural significance of housing, as well as the use and appropriation of public amenities in old age. Both environmental and sociocultural factors concerning private and public places, such as housing and neighbourhood, have a decisive influence on ageing in place. Therefore, it is necessary to consider and rethink the applicability of currently, general established models in order to explain the complex relationships between the elderly and the cultural-social-physical environment in these southernmost aging regions.

2.5 Discussion and Conclusions

Environmental gerontology today is divided in its criticism of the (sometimes) fruitless argument over the preeminent theoretical models and the possible need for new paradigms and methods of analysis to promote and facilitate their applicability. In this regard, various experts, such as Smith (2009) and Schwarz (2012), argue that the limited development of environmental gerontology can be explained by three factors: the decrease in theoretical, critical studies in applied research; their limited applicability in the practical field; and their predominantly positivist approach, focusing on independent predictive studies, where the physical environment -so essential in understanding the ageing process- tends to be ignored. Also, other researchers (Wahl and Weisman 2003) argue that the development of environmental gerontology remains controversial, due to the lack of empirical evidence related to methodological problems; lack of control groups and sample selection; and the predominance of descriptive studies focusing on the characteristics of the social environment, leaving aside the physical milieu. It follows from this that to date this branch of gerontology lacks a set of theories and methods shared by their researchers. Despite the importance of some of its central theories, such as the ecological model of ageing (Lawton and Nahemow 1973) or other approaches based on “person-environment” interaction, environmental gerontology (Wahl and Lang 2003), it lacks the necessary consensus as regards past and present theoretical scientific achievements, as well as an integrative theoretical benchmark framework, due largely to the multidisciplinary nature of the disciplines it comprises, and the increasing heterogeneity of its data and results (Schwarz 2012). However, proper use of research into environmental gerontology should not just restrict itself to identifying the factors and causes of man’s relationship with the environment but also create awareness and the conditions for its application to improve the quality of life of the elderly (Schwarz 2012).

On the other hand, most of the approaches are focussed on studies and experience gained in developed countries (Smith 2009). An analysis of the possibilities of future research should place the focus on aspects which go beyond traditional approaches undertaken so far, and along three main lines: (i) the conceptual and methodological advances associated with interaction between different disciplines

which deal closely with the elderly population's interaction with the environment; (ii) the new conditions imposed by global patterns of behaviour and technological and social innovations in local areas; but also (iii) the conditions under which demographic ageing is taking place in developing countries, in this case in Latin America.

Indeed, one of the most controversial issues concerns the drawbacks of validating the methods and scales of measurement in environmental gerontology. Some authors (Kendig 2003) have argued that an understanding of the relationship between the elderly and their environment from a macro perspective is needed; however, certain gerontologists tend to look at the context at the micro and personal level, and the question of diminishing capabilities, associated with a quantitative and qualitative methodology, respectively (Andrews et al. 2013). Also, many experts choose multivariate analyses of the different dimensions of the physical-social environment to understand residential satisfaction among the elderly (satisfaction with neighbourhood, accessibility, facilities, geographical location, etc.), which has not, however, overcome the difficulties associated with validating and replicating the methods used, and the risk of obtaining studies which are more descriptive than analytical (Amérigo and Aragonés 1997). Meanwhile, other researchers suggest the possibility of using a single, well-designed variable in assessing satisfaction with housing, which would function equally well, or better, than several different variables that may not measure the same content (Wanous et al. 1997; Gardner et al. 1998; Bergkvist and Rossiter 2007). The question of measuring a ratio between elderly individuals and the physical space they inhabit is necessarily complex (Iwarsson et al. 2013). Individuals seek security in their environment, at the same time as vital stimuli and the capacity to act there (Oswald and Wahl 2005), through horizontal forms of interaction (relationships between individuals in one same residence); vertical forms (an individual lives at the same time at different regional levels which overlap each other, as noted by Peace et al. (2006); or time-bound forms (each individual carries with them a legacy of decisions that determines their relationship with the physical space). All leads to a "recognition of options" on the part of the individual, depending on circumstances and experiences (Peace et al. 2011). Even theoretical and methodological tensions become mixed, from psychological and behavioural standpoints of the individuals in the nearest residential locations, to sociological guidelines and public policies governing decisions on a macro scale (Wahl and Weisman 2003; Wahl and Lang 2003). These tensions require greater and deeper analysis in the future, once theoretical bases and methodological tools that will facilitate better analysis have been found.

To date, two challenges urgently await the heterogeneous world of environmental gerontology researchers, being the first to promote a true global consensus as to theoretical and empirical development through new methods of research, and systematic standardization of tools and tests between disciplines—as well as from an interdisciplinary approach. A second challenge is to encourage their applicability in the practical field and, in general, in public policy on ageing, based upon its adaptability to heterogeneous geographical and sociocultural settings, comprising the many links between the macro, meso and micro environments of the ageing-population. Thus, a real impetus is needed to overcome the obstacles hindering the

development of communication, bonding, cooperation and solidarity between researchers and institutions globally, particularly in developing regions, in environmental gerontology.

Despite the necessary criticism, discoveries in environmental gerontology are creating growing expectation among researchers in various sciences, professionals, managers and society in general, at a time when the conditions created by globalization and social and technological innovations are reaching any region and society. Challenges of population ageing associated with an urbanized world require a greater understanding of increasingly complex, dynamic and technically advanced environments where the population is growing—and will grow—old. Also, the global trend of ageing in place is associated with the preference of the elderly to continue living in a familiar setting, such as their own home and neighbourhood. All this makes environmental gerontologists key professionals who stand out for their research into the understanding of the physical, technological and social surroundings for growing old positively, and the adaptive processes associated with age-related functional loss, as well as their relevant role in the applicability of their findings in heterogeneous and changing environments for ageing.

Globally, in the past 60 years the main concern of researchers, practitioners and governments has been focussed into the increasingly ageing population, associated with declining fertility, reduced mortality and migration. In addition, over the course of time, a process of concentration of the aged population into urban areas has been reported, particularly in developing regions, which has led to a causal relationship between environmental deterioration and loss of quality of life for the population (Keyfitz 1996). Furthermore, the ageing phenomenon has gone from being approached from an institutionalized and palliative perspective, linked to fragility and dependence, to now being considered as a natural, widespread process, which from a preventive and proactive standpoint, focuses on promoting active ageing in place: in the home and neighbourhood.

In the literature there is much evidence, which indicates the bias of gerontology research towards examples from developed countries, particularly the US, a fact which sometimes prevents extrapolation to other contexts. Many of these studies put their emphasis on institutional settings—but not specific urban areas—where large proportions of the elderly live (Smith and Smith 2009a, b). It is necessary, therefore, to establish new analytical and methodological frameworks, adapted to the new reality of ageing, favouring comparison between different geographical and cultural contexts. Reductionist forms of research into the current situation have been prevalent until now, clinging closely to familiar disciplines and contexts, but little interested in finding generalizations appropriate to the heterogeneity of the ageing process. An example of this need for open research is to consider the importance of the entire course of life in understanding the behaviour and decisions of the elderly when they live in dynamic and naturally changing residential environments—but which are “familiar” to them (Phillips et al. 2011). The construction of individual perceptions, the experiences gained in the assessment of environmental satisfaction, and the changes in the residential environment throughout life are all decisive factors for the skills and abilities of the elderly with regard to the place

where they live, or will live in the future, and their identification with it (Gitlin 2003; Smith and Smith 2009a, b). A break away would, in many cases, facilitate their residential mobility, in so far as they recognize other possible options for a change of residence (Peace et al. 2011), however the conditions and strategies for keeping the elderly population in their own homes and residential environment have not yet been sufficiently analysed either (Gitlin 2003; Landorf et al. 2008; Fausset et al. 2011).

Like other similar shortfalls, this must be corrected in future studies in other geographical and cultural contexts where the problems to be analysed have individual backgrounds, deep cultural roots, and regulatory and legal structures that determine the knowledge needed to resolve and apply these socially (Schwarz 2012). Therefore, any environmental gerontology research which assesses life events without seeking a solution to problems, no allowing social involvement, no using the experience of populations, or no training the social partners involved, would have limited usefulness (Windley and Weisman 2003), particularly when trying to implement models designed in other countries with different cultural resources.

Through a review of the literature, it has been found that studies on environmental gerontology which jointly address the regions of Mediterranean Europe and Latin America are insufficient and too shallow as regards the issues discussed, as evidenced by those analysing the implications of the residential environment on health (Garin et al. 2014) and physical exercise (Annear et al. 2014). Initially, it can be said that these Latin American countries produce a great deal of social, economic and environmental situations that facilitate the emergence of scenarios which analyse the relationship between population (specifically, the elderly) and environmental conditions. Poverty, social inequality, the processes of exclusion and segregation in cities, environmental hazards, stagnation in the education and economy of many social groups, are widely recognized phenomena in many of these countries. As happens in other disciplines such as environmental psychology (Corral-Verdugo and Pinheiro 2009), there is an “indigenous” way of understanding the relationships between population and surrounding environment, albeit coexisting along with other “western” perceptions.

Mediterranean Europe and Latin America have sought, without much success so far, to establish a methodology that can be replicated in different environments, to assess the significance of the physical and social context of ageing and its implications for theoretical development, as well as its applicability in the sphere of public policy. In this direction, studies produced have been characterized by important theoretical and empirical limitations resulting from their applicability in different national contexts, due to methodological weaknesses. Similarly, the low penetration of environmental gerontology in the academic field of the European Mediterranean and particularly Latin America, is explained by the lack of truly multidisciplinary research groups, which would integrate the vision of professionals from the physical, built environment of ageing—such as architects, designers, geographers and planners, among others—and the perspective of professionals in the social environment of ageing, such as psychologists, social workers, public health professionals, sociologists and anthropologists.

The results indicate that the reduced visibility of the studies conducted by researchers from both regions is associated with a lower level of scientific development, such as lack of funding and collaboration, problems of inbreeding and academic isolation, poor updating of university courses, and less visibility of journals in languages other than English. Also, some researchers (Lloyd-Sherlock 1997) stress that, due to the socio-spatial complexity of (extremely unsafe) urban slums in Latin America, the use of certain methodological tools, such as formal surveys of the elderly, is particularly problematic. Therefore, researchers from these countries should be more creative and produce new methodologies adapted to each social and environmental situation of ageing.

In a context of an ageing society it is important to understand the many physical and social factors that determine the daily lives of the elderly, and that means dealing with the enormous complexity of attempting to control all the factors that influence ageing. Progress in medium and long term research in environmental gerontology depends largely on the growing numbers of dependent and frail elderly people with chronic and degenerative (Alzheimer and Parkinson diseases) actually benefitting from new measures, and experiencing a real improvement in their everyday life through changes in the environment. This is a commitment that should lead society in Latin American countries to reflect upon the importance of appreciating the little things that make it possible to face every-day environmental problems and promote an improvement in the quality of life of the elderly and particularly of those who require care, without forgetting their caregivers, families and professionals.

In this sense, diagnoses and guidelines produced by and for the purposes of international organizations, and the structures of economic capital and social participation that deal with the elderly, are of vital importance. Vertical interaction, top-down, or horizontally between them, can create mechanisms of knowledge-building and transfer to society, and to the organized individuals involved. As noted above, instruments such as the Conference of Brasilia, in 2007, and the Charter of San José, in 2012, within the Regional Strategy for implementation of the International Plan of Action on Ageing, in Madrid in 2002, have created commitments between states to launch initiatives that recognize the situation of the elderly, from a global perspective: that of human rights—and among these, the right to decent housing and a supportive residential environment that improves people's quality of life (Huenchuán 2009) (Table 2.1).

Beyond their official recognition, various problems limit their applicability, as recognized by the Latin American Demographic Centre (CELADE): the lack of standardization of the concept "residential environment", the heterogeneity of their components and the difficulty in providing reliable and consistent data which prevent proper diagnosis of the situation (CELADE 2006). Notwithstanding, there has been an effort to lay the foundation for the analysis of social environments (family and household arrangements, social networks, social participation, violence and abuse, and social image) and the physical *milieu* (housing and urban environment) within the parameters of the Regional Strategy. Similarly, policies of intervention in this area do not have even general coverage, since there tend to be rather narrow, limited public policies or they don't extend to all the countries. Nor are they intended

Table 2.1 Main areas of intervention of the physical and social environment programmes for the elderly in Latin America and the Caribbean

Country	Physical environments			Social environments			
	Housing	Transport	Accessi- bility	Social networks and family support	Social partici- pation	Abuse	Education
Aruba	X	X	X	X			
Argentina		X	X	X	X	X	
Belice	X			X	X	X	X
Bolivia						X	
Brazil		X		X	X	X	
Chile	X	X	X	X	X	X	X
Colombia			X			X	
Costa Rica	X	X		X	X	X	X
Cuba	X	X		X	X	X	
Dominican Republic	X		X	X		X	X
Dutch Antilles				X			X
El Salvador	X					X	
Guatemala		X		X			
Honduras			X			X	
Mexico	X		X			X	
Nicaragua		X	X			X	
Panama	X			X		X	
Paraguay			X		X		
Peru	X					X	
Puerto Rico	X	X	X	X		X	
Uruguay	X			X	X	X	
Venezuela		X				X	
N=22	12	10	10	13	8	18	5

Source: Adapted from Huenchuán (2009), by authors

only for the elderly but rather the entire population at risk of poverty and exclusion, including the elderly (Huenchuán 2009). Despite their legal recognition, there is no guarantee for the continuity of these limited policies or future expansion to more countries and more specific groups, such as the elderly.

A global reality, also in Latin American countries, is the implementation of bottom-up initiatives that increase the social and political involvement of older people to improve their quality of life in their home environments. Some of these have developed international channels, such as HelpAge International in its Latin American division, the Iberoamerican Federation of the Elderly (Federación Iberoamericana de Asociaciones de Personas Mayores) or the Continental Network for the Elderly (Red Continental de Personas Mayores). Others are focussed on the care of the elderly in their own countries, such as Costa Rica. A review of the types of partnerships and their objectives suggest that there is no line of approach to promote the interests of the elderly with regard to housing and the residential environ-

ment. As mentioned above, the initiatives which stir up most interest are those directed at remedying individual shortages/deficiencies, such as poverty and social exclusion, assistance to families and their members, obtaining basic economic resources, or accessing healthcare resources. The home, even though a primary necessity, is not usually envisaged among the objectives of associations that serve the elderly, nor are the environmental conditions of residential settings. Once again the contradiction between the recognition of the rights of individuals and the difficulty of compliance, also between associative structures, is highlighted. This is yet another challenge to take on board in the coming decades, as the increasingly elderly population demands more attention in all areas.

People will live increasingly longer, so society must prepare itself for the longevity revolution, where environment will play a central role in the way population behave and face old age, as a time of change and opportunities, in order to promote a positive outlook and the desire to live life to the full at a late age.

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