THINKING MAKING AND LIVING ARCHITECTURE IN AN AGEING SOCIETY.

THE TYPOLOGICAL PROBLEM IN CONTEMPORARY CULTURE AS AN INSTRUMENT OF SOCIAL INCLUSION FOR PEOPLE LIVING WELL WITH DEMENTIA

DAVIDE LANDI

A thesis submitted in partial fulfilment of the requirements of Liverpool John Moores University for the degree of Doctor of Philosophy

March 2020

NOTES TO THE READER

The thesis is composed of two volumes. The first volume contains the main body of the thesis. It is structured in four chapters that are further elaborated with the introduction, the methodology, the literature review, and the conclusion. Each of them is completed with their dedicated reference list. The second volume contains the Appendix (i.e. Ethical Approval application, Behavioural Mappings, Semi-structure Questionnaires and Qualitative Interviews). They expand upon and justify arguments in the first volume, although they are beyond its scope. Therefore, the two volumes can be read separately as well as simultaneously.

Furthermore, the thesis in the first volume proposes two levels of readings. Firstly, the more comprehensive level of reading is represented by the full document. Secondly, the reader may choose to read the introductory paragraph of each chapter throughout the whole thesis. It illustrates the aims and outcomes of a chapter. The introductory paragraphs inform the reader on each stage of the research while how they contribute to the whole study.

ACKNOWLEDGEMENTS

Looking back at the case study visits, supervisors and peers ask how it was possible to do on-site research is such different contexts (i.e. cultural and language differences). It helps to consider the possibility of how an openness, which is peculiar to open types and typologies, and "Open Architecture" (Akcan, 2018) is first embedded in the mindset of the case studies' occupants and contributors (i.e. inhabitants, managers, professional caregivers, volunteers, and architects).

Furthermore, this same openness must also be acknowledged to the members of the supervising team. I list them in alphabetical order: Dr Robert MacDonald, Denise Parker, and Dr Grahame Smith. While from different academic backgrounds, they could lead me through a meticulous development of the study, which attempts to create synergies among different domains. Over time, the supervising team was able to welcome other contributors. Therefore, I must mention at this point Architect Bill Halsall, Prof Michael Riley, and Dr Emma Roberts. This inestimably supported the investigation.

I also would like to highlight the following publications, which have been published during my PhD studies and have been influenced by the work contained within this thesis:

Peer-Reviewed Journals:
- Landi, D. and Smith, G. (2019) The Implications of a New Paradigm of Care on the Built Environment. The Humanitas© Deventer Model: Innovative Practice. *Dementia: the International Journal of Social Research and Practice* [online], pp. 1-8. DOI: https://doi.org/10.1177/1471301219845480.
- Landi, D. (2019) '"The Open Typology": Towards Socially Sustainable Architectural and Care Types.' *Architecture_MPS* [online] 16 (1), pp. 1-18. DOI: https://doi.org/10.14324/111.444.amps.2019v16i1.001.
- Landi, D. (2018) "Open Typology" as Heterotopia: A Comparative Analysis between Gojikara Mura in Nagakute (Japan) and Humanitas in Deventer (Netherlands). *The International Journal of Design in Society* [online] 12 (3), pp. 41-71. DOI:10.18848/2325-1328/CGP/v12i03/41-71.

Book | Magazine Contributions:
- Landi, D. (2018) Towards New Architectural and Urban Typologies: Thinking, Making and Living as a Post Occupancy Evaluation Method. In: Palti, I., Taylor-Hochberg A., (eds.) *Conscious Cities Anthology 2018: Human-Centred Design, Science, and Technology.* London: Conscious Cities Ltd.
- Landi, D. (2017) Cities "on the Run." *Studio Magazine* Issue 12, pp. 20-29.

On-Line Contributions:
- Landi, D. (2017) The Impact of Aged People and Dementia-Friendly Environments in Users' Socio-Economic Inclusiveness. *Salus Global* [online] Available at: http://www.salus.global/article-show/the-impact-of-aged-people-and-dementia -friendly-environments-in-users-socio-economic-inclusiveness.

Conference Proceedings:
- Landi, D. (2018) Living "Heterotopias": The Gojikara Mura© Settings. *Proceedings of the 5th International Conference on Architecture and Built Environment S.ARCH.* Erlangen, 11 July pp.431- 452.

Conference Presentations:
- 16th Annual International Conference of the Architectural Humanities Research Association (21st-23rd November 2019, Dundee, UK) - *Paper Presentation: The Ethics of Open Types.*
- 14th International Federation on Ageing Global Conference on Ageing (8th-10th August 2018, Toronto, Canada) - *Paper Presentation: Why "Heterotopias"?*
- Architects for Health Student Design Awards 2018 (28th June 2018, London, UK) - *Paper Presentation: The Architectural Use of Disorder. The Group Home in Noboribetsu.*
- 5th International Conference S.ARCH (22th-24th May 2018, Venice, Italy) - *Paper Presentation: Living "Heterotopias": The Gojikara Mura© Settings.*
- SoFa Talk 2018 (11th April 2018, Liverpool, UK) - *Paper Presentation: Thinking Making and Living Architecture in an Ageing Society.*
- 12th International Conference on Design Principles & Practices 2018 (5th-7th March 2018, Barcelona, Spain) - *Paper presentation: The "Open Typology" as "Heterotopia." A Comparative Analysis between the Gojikara Mura© in Nagakute (JP) and the Humanitas© in Deventer (NL).*
- Bristol 2018 Amps Conference (25th - 26th January 2018, Bristol, UK) - *Paper Presentation: 'The Open Typology': Towards Socially and Economically Sustainable Architectural and Care Models.*
- European Healthcare Design 2017 Congress & Exhibition (11th -14th June 2017, London, UK) – *Poster Presentation: The Impact of Aged People and Dementia-Friendly Environments in Users' Socio-Economic Inclusiveness.*

ABSTRACT

The twenty-first-century norm is represented by people living longer. This new demographic structure creates a number of societal challenges. One such challenge is that living longer and becoming old increases the likelihood of acquiring long-term conditions such as dementia. Another challenge is with the difficulties in defining a clear line between normal ageing and pathological ageing; a blurred distinction leads to stigmatising older adults as a social and economic burden. Therefore, there is a need for a care-model shift that is able to cope with a potential increase in demand for high-dependency and high-cost services and also address stigmatisation. Importantly, older adults' mental and physical well-being should have a central role in this "shift." A robust and productive relationship between people and space and well-being can have a positive impact. Of course, this shift has inevitable architectural repercussions.

Taking this into account, the aim of this thesis is to investigate critically the comparable impact of the Humanitas© setting in Deventer (the Netherlands), the Rudolf© setting in Helsinki (Finland) and the Gojikara Mura© setting in Nagakute (Japan). Specifically, the Humanitas is a nursing home with a population of 50 older adults with dementia, 80 people with severe physical suffering, 20 people with social difficulties, ten people in short stay for recovery and six university students. The Rudolf is a senior home with a population of 18 young adults with mental impairments; 50 older adults with later stages of dementia; 52 older adults with early stages or no mental or physical impairments, and four young adults/university students. The Gojikara Mura© is a multigenerational community that accommodates a child day-care facility, a kindergarten (200 children between 3 – 5 years old), an adult day-care centre, an assisted living complex (50 older adult residents with different level of physical and mental impairments), a nursery school (300 enrolled students between 6 to 12, and 18 to 22 years old), and a nursing home (48 older adult residents with different level of physical and mental impairments).

The analysis of these three case studies is based on a one-time post-occupancy evaluation framework and is organised into three parts defined as "thinking, making and living." The method reveals the principles for conceiving a new architectural type: the "open type," which is grounded in the notions of an "open architecture" and an "open city." This "open type" promotes multidisciplinary, collaborative and socially inclusive design principles, and thereby order as a result. Consequently, renewed adoption of Aristotelian ethics is revealed. They concern with the notion of dwelling that emphasises the value of socially inclusive forms of collective life. In this thesis, they are translated into a new pattern of care, which is built around participatory and coherent collaborative teamwork among different groups of healthcare providers, volunteers, residents and their families. The "open type" setting, therefore, addresses both a new architectural design and new care types with a focus on normalising ageing and tearing down personal and socioeconomic stigma. It may give form to a new type of housing stock not existing in Western countries and thereby institutions and governments must politically and economically support these initiatives.

List of Contents

INTRODUCTION

This thesis aims to define the notion of "open types." They do not just imply the use of collaborative and socially inclusive design principles; although they impose a multidisciplinary, collaborative and socially inclusive order as a result. "Open types," however, requires a renewed adoption of Aristotelian ethics to the Thinking, the Making, and the Living of a work of architecture (Curzer, 2012). On the one hand, the term types refers to the notion introduced by theorists and architects such as Aldo Rossi (1982), Rafael Moneo (2010, 1978) and Antoine Picon (1988). Types embed a conciliatory or oppositional critical potential which is related to moments of social rupture (Himes, 2019). Types, therefore, are an architectural tool for the translation of the society's articulation and its socio-economic changes into the built environment. They inform the physical forms of buildings. On the other hand, the term 'open' as it has been employed in this thesis is far from its modern and contemporary contradictions, which has generated an illusory free circulation of data, people, capitals, and goods in the context of a neoliberal economy and its free markets. It also diverges from a notion of open digital platforms, software, and networks architecture, which are not further investigated. Instead 'open' refers to an "open architecture" and "open city" that embraces a plurality of notions such as multiplicity of meaning and democracy as physical experience and participation, open-sourceable design, flexibility and adaptability of forms, collectivity and collaboration, and the expansion of social citizenship (Akcan, 2018, p.10). Therefore, 'open' results from a process which is grounded in the comprehension of the reality (Sennett, 2018). However, an "open architecture" and thereby an "open city" imply a consciousness of their inhabitants in dwelling (Heidegger, 1971). This original contribution to the subject clearly sanctions a rupture with more conventional urban and architectural theories and strategies. After the recent societal changes and their challenges which for this study are a new demographic landscape, the rising number of older adults with long-term conditions and their stigmatisation, the spiralling cost of long-term healthcare services, and the shrinking household structure with negative implications on informal and professional

care provision; there is an imminent necessity of innovative policies, economic models and forms of the built environment which must include a major involvement of the society as whole (OEDC, 2015; European Union, 2016). Whereas the institutionalisation of older adults is still the prevalent solution, the open types provide the generative principles, to be specific to this study, for alternate forms of older adults' long term care facilities. This produces real social and economic growth as a consequence of continuous exchanges and displacements among its inhabitants (Sennett, 2018).

The Thinking Making and Living Framework

A considerable amount of literature has been published on the Thinking, Making and Living of a work of architecture. This body of literature nearly always refers to architecture as a profession; however, it can still help us to trace a brief genealogy of this framework to extend its use in academia. To begin with, there is, certainly, a substantial contribution to the theme by architects who were also educators. Talking to his students, for example, Louis Kahn (1998) affirmed that architecture did not exist and that it could only be present in the mind (Kahn, 1998). Remarkable is Kahn's statement "what the building wants to be." While it was underpinned by a latent reference to Plato's metaphor of the prisoner whose comprehension of the outside world follows the projection of its shadows on the walls' cave, the statement appeals to a necessity of abstraction of architecture (Williamson, 2015). For his part, Peter Eisenman considered the abstraction of a work of architecture, and thereby its critical thinking and questioning essential. The detail of an interior of Eisenman's *House VI* (Cassara', 2006) proves that a work of architecture comes after its abstraction. It is the consequence of critical thinking, which goes beyond its physical consistency. Otherwise, the simple representation of thoughts would limit the intellectual work of an architect. This great divide was inherited from the 15th century with Brunelleschi's perspective. Eisenman, therefore, introduced the notion of "diagrammatic thinking" as a vehicle of abstraction

of what a work of architecture should represent and thereby to be (Cassara', 2006). Consequently, it suggests that the critical thinking of architecture is underpinned by the use of a wide spectrum of vehicles. They are subject to time and strongly correlated to the designers' social and professional backgrounds. For example, Hilary Sample and Michael Meredith Architects' (MOS) boundless research for various forms of repetition and rhyme between architectural elements passes through a critical investigation of "domains," small groups, and individuals. They echo the ephemeral nature of the con-temporaneity in which networks and information are more relevant than physical forms (Carey, 2016). This is also reflected in the programming of in-house software such as *DRIFT2* and *FAÇADE*. They allowed MOS to bring light to unexplored facets of the architectural field (MOS, 2019). While Go Hasegawa's (2011) works go back to critical thinking of architecture as a dialogue between the architect and physical models. In this, they prompt "good questions" that help the architect to untangle the complexity of the profession and its facets (e.g. the history, the culture, the city, and the technology).

In a different position stands Peter Zumthor. In his *Thinking Architecture*, the author mentions the equal role between his memories, images, and the rational, objective criteria for the development of a work of architecture (Zumthor, 2006). Zumthor consciously (professional experience) and unconsciously (life experience) has collected them throughout his life. While different in its essence, the critical thinking underpins any work of architecture and its making that follows. The making, therefore, embodies a certain pragmatism. Go Hasegawa (2011) described it as a language. The analogy refers to the capability of the architect in combining architectural elements or parts, as word classes, which allow a space to come into dialogue with natural environments (e.g. roof and foundations respectively with "sky and earth"), and people's lives (e.g. proportions between horizontal and vertical surfaces with human bodies). For the architect David Adjaye, "modesty" is central in the making of a work of architecture. The term "modesty" refers to the adoption of a language, which is informed by individuals'

governmentalities. In this, social practices, movements, details, and materials make a work of architecture a whole (Allison, 2006). Instead, construction is for Zumthor (2006) the core of making a meaningful whole, space out of many parts. Construction allows a work of architecture to become part of the world, a witness to the human ability to construct concrete things. The architectural drawings are an accurate medium that expresses the physical consistency of a work of architecture and thereby supports its making. Thomas Heatherwick (2015) argued that the making of ideas happen where their development passes through a process of understanding materials and gaining experience of using them. While MOS acknowledges a contemporary contradiction between the making and the unmaking of a work of architecture. The office attempts to investigate this contradiction with non-necessarily physical making (i.e. media, videos, etc.) (Carey, 2016).

These architects stand in different positions, however, their contribution helps to identify the Making as the process of combining forms and materiality both in the physical and non-physical domain that comes in parallel or after a critical intellectual work: the Thinking. This attributes to a work of architecture direct or indirect legibility. The precise arrangement of discrete elements, which give "order" to a building may be linked to Vitruvius' notion of "ornament" (Vitruvius, 1914). This should not be confused with an aesthetical approach that informs a mere judgement of taste. While it abundantly informed the architecture of the 18th century, the aesthetical approach was also strongly criticised (Harries, 1997). The essay 'Ornament and Crime' by Adolf Loos (1998), for example, questioned the reduction of the problem of architecture as a simple problem of superfluous decoration. This argument was further extended to the modern functionalist and programmatic determinism. On the one hand, Robert Venturi and Denise Scott Brown (1972) argued as modern architecture turned buildings into big ornaments, the duck, in the attempt to reject superfluous symbolism. For them, Las Vegas was their field of study. On the other hand, authors like Harries (1997)

considered functionalism as an additional superfluous decoration to apply in a building. In this, buildings would become too loud and thereby not anymore able to speak to their occupants.

In this thesis, therefore, the notion of order and legibility is not concerned with the aesthetical question in the sense of the necessity of taste or a particular style. Once a work of architecture is completed, instead, the legibility establishes a relationship with its occupants. They are a sequence of physical and psychological relationships, which expand occupants' experiences and thereby inform the existences of human beings (Harries, 1997; Fesmire, 2003; Ray, 2005). The relationships start a sequence of reciprocal interactions not limited between them and the work of architecture, although they also include the city (Hasegawa, 2011). This, therefore, gives movement to the built environment as a whole, the Living.

While this large body of literature has investigated the professional domain, the work of Heidegger (1993) allows us to more strongly relate the Thinking Making and Living framework to the everyday life. The German philosopher offers an alternate theory on the Thinking Making and Living framework. First, the German philosopher suggests a slightly different vocabulary. To re-establish the unity between "Man and Being" (Heidegger, 1993, pp.345) which was negatively affected by modernity and its architecture, Heidegger uses the terms 'building', 'dwelling', and 'thinking' of a work of architecture to support his argument. In his words, then, the man has lost his capacity to build to dwell and thereby to dwell in a work of architecture. For him, dwelling is shown as a form of "Being" that implies a thinking (Heidegger, 1993). To return to our framework, the Thinking, Making and Living are not mere phases of a design process. They, however, acknowledge their equal importance as well as the contribution of different groups of mind to the realisation and comprehension of a work of architecture. In this, the "Man" rejects the modern divide from "Being," while becoming an inhabitant,

a dweller of a work of architecture again.

Therefore, it questions more traditional literature, which is concerned with history and theory of architecture. Nearly always, it limits a critical analysis to the Thinking and the Making of a work of architecture, while the Living is consistently excluded. Probably, it reflects a modernist inheritance underpinned by a technocratic functionalisation and segmentation of nature (Heidegger, 1993). From being synonymous with a complex nature (Sennett, 2018; Koolhaas, 1994; Rowe and Koetter, 1978; Jacobs, 1961), cities and works of architecture, have embraced a latent spatial and social segmentation, for instance. However, this followed the scientific discoveries of the seventeenth and eighteenth centuries such as electricity and metallurgy, that together with the rapidly growing industrial sector led to a new economic model. This was the beginning of modern capitalism (Burdett and Sudjic, 2008; Sennett, 2004). Architects and urban designers translated the requirements of a new economic model with architectural and urban strategies such as zoning and single-use development. Scholars such as Harvey (2001; 1985) extensively investigated this relationship and its implication on inhabitants' urban spatial and time experiences. The city, therefore, became something different (Geddes, 1915). For Curtis (2009), this determined the "mechanisation of the city;" while Tafuri (1976, p.7) described the city as "accumulation mechanism," in which technological progress prevails. The city as a mechanism emphasised its efficiency and performance according to the requirements of the new economic model. Inevitably, architecture and urbanism as disciplines were affected. Nevertheless, the 2008 economic crash declared a failure of traditional economic models and their related architectural and urban strategies, while contemporary culture has posed profoundly different challenges. The term culture refers to all the unself-conscious agents and challenges, which are latent in our contemporaneity (Alexander, 1973). The production and availability of new technologies, for example, have redefined the availability and nature of work (OECD, 2017), and the migration phenomena of European and

Non-European citizens have generated a displacement of human resources (OECD, 2018). The new demographic landscape, instead, is central to this thesis (OECD, 2015). In particular, it is the result of health and socio-economic achievements such as better healthcare systems, improved economies, a reduction in infant mortality, and a growing number of adults living longer. In this, the rate of people with physical and mental impairments such as dementia, their related high dependency services, and expenditures are expected to increase out of control of societal budgets (European Union, 2015). The term dementia is used in this thesis to describe older adults' mental and physical impairments which come after the deterioration of language, visuospatial skills, memory, behaviour or personality, and manipulation of acquired knowledge (Budson and Kowall, 2014). On the one hand, it has inevitably led to a stigmatisation of older adults as a social and economic burden (Levy, 2017). On the other hand, the persistence of an urban and architectural segmentation has strengthened social and economic inequalities among its inhabitants (e.g. an increasing number of older adults socially isolated) (OECD, 2018; Burdett and Sudjic 2008). In extreme cases, it may support the expulsion of entire cohorts of them from socio-economic and political scenarios (Sassen, 2014).

However, it provides space for potential innovative economic models, informal collaborations, social and care paradigms and thereby urban and architectural correlates. Policy makers and governments, from their part, must translate them through the promotion of a series of policies, and legislative measures. All this falls in the more broad critique of architectural and urban strategies such as the zoning and single-use development. It, therefore, reveals a deep crisis in terms of contemporary urban and architectural strategies and thereby theories to tackle contemporary inequalities (Mostafavi, 2017). This important urgency of a change in both practices and theories was further extended to other design domains by authors such as Dunne and Raby (2013). If we consider Architecture as a practical and conscious answer to

a posed unconscious problem, it nearly always reflects the cultural context. In this, architecture is necessarily accompanied by a theory (Illies and Ray, 2014). In a certain sense, architectural theories officialise informal and unconscious answers although they are informally and widely adopted by members of a cultural context (Koolhaas, 1994). This sets the basis for a theoretical contribution to architecture.

To do this, the thesis explores three older adults long-term care facilities. While they do not convey optimum design quality, the three older adults long-term care facilities geographically limit the international study to nations where their populations have a new demographic and household structures. They, therefore, adopted alternate care models, and thereby constitute novel environments for older adults. The first setting is the 1964 Humanitas© in Deventer (the Netherlands). It is a nursing home with a total population of 166 residents (fifty older adults with dementia, eighty people with long-term physical conditions, twenty people with social difficulties, ten people in short stay for recovery, and six university students). The second setting is the 1981 Gojikara Mura© in Nagakute (Japan). It is a cross-generational community that provides diverse services such as child day-care, kindergarten (200 children between three and five years old), adult day-care, assisted living (fifty older adults residents with different level of physical and mental impairments), nursing school (300 enrolled students aged between 18 and 22 years old), and nursing home (forty-eight older adults residents with different levels of physical and mental impairments). These services accommodate not only older adults but also their families and visitors. The third setting is the 1974 Rudolf© in Helsinki (Finland). It is a senior home with 124 residents (four young adults/ university students, 18 young adults with mental impairments, 50 older adults with later stages of dementia and other mental impairments, and 52 older adults with early stages or no mental or physical impairments).

Nevertheless, Humanitas, Gojikara Mura, and Rudolf have striking differences

in terms of scale, economy, as well as a socio-cultural background. Yet, as many studies demonstrated and as is shown in this thesis, there are striking similarities in the challenges posed by the contemporary context, and in the styles of the answers adopted. There is, in practice, a remarkable convergence in their conceptual approaches and self-adjusting process (Alexander, 1973), which generated similar collaborative synergies concerning different social and age groups. In this, an innovative response to the everyday challenges of older adults with early stages of dementia and their carers is revealed. Inevitably, the process affects the care models and the architectural frame. The critical investigation of the case studies untangles this relationship and its effects on occupants' living experience. The study empirically analyses it through social science theories to distil the principles of the open types while the study theorises its notions through philosophy. One can think about authors such as Vitruvius (1914), Le Corbusier (2007), Kahn (1998), and Koolhaas (1994). They had different concepts of "theory," although they confirm that architectural theories embed philosophical reflections (Illies and Ray, 2014).

The overall structure of the thesis is composed of three main sections. Section (a) includes *Literature Review, Methodology, Social Metabolism, and From The Functionalist Model To The Architectural Type In Contemporary Culture – The Open Type.* On the one hand, this section covers architectural, philosophical and social theories that concern with the notions of architectural types, "heterotopia," (Foucault, 1984; Hetherington, 1997), and "open works and cities" (Eco, 1989; Sennett, 2018). On the other hand, it illustrates the Dutch, Japanese and Finnish socio-demographic tendencies and compares them with the British context. Together with their economic and political implications on the care provision, this section completes a robust methodological and theoretical background. Additionally, a brief history of the notion of Dementia crystallises its meaning for this study.

Section (b) empirically presents the three selected case studies. The findings are collected and reported according to three analytical segments that ensure the project continued to preserve parallels with the architectural profession and its theoretical background: the Thinking Making and Living framework (Landi, 2017).

Section (c) constitutes the discussion surrounding the necessity of a renewed notion of architectural types and ethics. It includes *Constructed Open Types: the Gojikara Mura© in Nagakute (JP), the Rudolf© in Helsinki (FI), and the Humanitas© in Deventer (NL). A Comparative Argument; Theming 1: a New Paradigm of Care; Theming 2: Redefining the Notion of Typology; Open Types As Heterotopia; and The Ethics Of The Open Types.* An ageing population and its challenges have informed only a few examples that attempt to adopt innovative care models. This has had inevitable architectural repercussions. By analysing the link between physical forms, care models and inhabitants' social well-being in the three case studies, the study aims to comprehensively identify architectural types in contemporary culture, the open types, and thereby to expand the nascent theoretical discourse on "Open Architecture" (Akcan, 2018).

Notes on Method. Risks and Benefits of a Comparative Study

The reader should bear in mind that the study has some limitations. The notion of types aims to frame a general design principle. While the thesis attempts to introduce an alternative notion of types through the analysis of three international architectural projects (case studies analysis) within a limited geographical area and a specific architectural research field, this may have implications on the generalisations of the results. Its danger is the potential for repetition of its principles - a "frozen mechanism" (Moneo, 1978). Unfortunately, the thesis is unable to encompass the entire architectural domain. Therefore, it represents an initial insight into this subject.

Nevertheless, to compare the physical settings of the case studies which are placed in three different countries - the Netherlands, Japan, and Finland - that diverge so fundamentally in their use and conception of the space, and health care systems is to risk the ire of both specialists in architecture and care provision. Necessarily, a somewhat oversimplified picture will emerge. Why run this risk? Apparently, this does not rationally fall into the comparative studies framework (McAllister and Silverman 1999; Van der Voordt et al. 1985; Cutler and Rosalie 2009). Nonetheless, the logic for doing so is grounded in the idea of avoiding the danger of ethnocentric focus over explanation or care policy/models over conviction. The temptation of describing everything in terms of cultural notions or national care strategies is therefore contained whilst common patterns revealed.

Methodologically, the evaluation framework and data collection present many aspects of a one – time Post Occupancy Evaluation (POE). However, it is tailored around three verbs: "Thinking, Making and Living." These establish parallels between professional practice and research/academia whereby the idea of architecture and urbanism can be generated and therefore understood through the present verbs constituting a design process (Landi, 2017). Additionally, this unique interdisciplinary study attempts to provide an insight into the relationship between care models, living experience and the architectural frame. Consequently, the three verbs provide three lenses of interpretation of the case studies (Goodsell, 1988). They untangle their latent patterns, which are related to architecture, social and medical/care sciences. In particular, the "Thinking" searches for the social and economic forces and ideas embedded in the selected works of architecture; "Making" investigates their effects on the physical settings of the selected works of architecture; "Living" describes the implications of the selected works of architecture on inhabitation, care provision behaviours, and thereby their impression on society as a whole.

By recognising the three key verbs: "Thinking, Making, and Living" as equally decisive parts in defining and dwelling a space, as well as to comprehend it, the study gave a voice not only to architects, and managers but also to professional and informal caregivers and inhabitants of the investigated older adults' long-term care facilities. The methodology, therefore, involves the collection of oral histories and storytelling from inhabitants and workers featured in the case studies. This created a more diverse narrative than more established architectural or social theory methods. For example, most of the books on architectural theory and history stop narratives around a work of architecture at the moment in which it leaves an architectural office to be built (Akcan, 2018). Consequently, the thesis translates these storytelling and oral histories in writings coherently without authorship interpretations. The case studies speak to us through its occupants and physical settings. Only by evaluating such verbs/processes, therefore, can the study disentangle the general principles of a new architectural typology from the one, that is country or case study specific, and that derive from the context (economic, political, and managerial) in which the architectural projects operate. As Peter Eisenman stated, the study employs this comparative method to examine the "state of shear" (Eisenman, 1963) between past and contemporary notion of types.

Furthermore, the study deals with data collected with a specific evaluation framework focusing only on the physical settings such as the natural light, the privacy gradient, and the community. This is because common features are illuminated. Second, the adopted evaluation framework- a one – time Post Occupancy Evaluation (POE) - allowed me to collect at the same point in time only. Consequently, a longitudinal study may reveal that findings vary from the one reported. Additionally, qualitative interviews and se-mi-structured questionnaires (self-report measures) are central to the methodology. These measures may be subjective (i.e. social interaction, etc.) whereas others are relatively more objective. Due to the geographical restriction of the three case studies,

some of the subjective measures as well as some of the objective indicators may be influenced by reporting and cultural bias.

In all this, the thesis is not a study on age and dementia-friendly environments per se; it does not necessarily tell us how they work in practice in all of their aspects. The phrase 'dementia-friendly environment' can be defined as a system of support that cohesively generates assistance for the person with dementia and acknowledges the experiences of the person to stay meaningfully engaged in everyday life (Davis et al., 2009). Even if in part illustrated, this study does not attempt to provide a comprehensive picture of the state of the art of age and dementia-friendly design standards, policies and regulations. Over time, policymakers have introduced design standards to extend independence and accessibility to older adults while limiting their early hospitalisation. This has been underpinned by the notion of "ageing in place" which has permitted a person to spend the second half of his/her life in a familiar place (MetLife, 2013). In this study, however, "ageing in place" refers to the multiplicity of meanings that the notion of place incorporates such as meaningful existence and belonging. This multiplicity is subject to a dwelling and thereby social practice of a place, and its temporal implications that limit or generate "situations" (Harvey, 1996). A Heideggerian reference effects the term "situations" in which a temporal consistency prevails on a place specificity (Harries, 1997). Throughout this thesis, the terms 'situations' and 'narratives' are used almost interchangeably to mean physical and psychological interactions peculiar to everyday life. The 'places' of these interactions, instead, are identified with the term 'territories.' Here in this study, the broad spectrum of not demographic-specific services, activities, and accommodations offered by the three older adults long-term care facilities constitute these 'territories.'

The main intention of this study, therefore, is to theorise open types as the design principles that translate continuous mutations in contemporary culture into works

of architecture. On the one hand, open types welcome alternate groups of mind to a participatory contribution to the thinking, making and thereby living of a work of architecture. On the other hand, they also give form to a work of architecture in which an alternate but socially inclusive, collaborative, and multi-disciplinary thinking, making, and living is performed. This implies the adoption of alternate ethics. They are concerned more with the notion of dwelling instead of the ethics of professional bodies, an environmental impact, the furbishing of cultural or symbolic meaning, the moral nature of functions and uses of buildings, or the impacts on health and safety of those who use the building (Illies and Ray, 2014). These ethics refer to Aristotelian investigations on the theme that problematize the meaning of being a member of a work of architecture or a city (Curzer, 2012). However, readers interested in the subject of an ageing population and its socio-economic challenges in the Netherlands, Finland, and Japan or elsewhere, as well as those in the design of age and dementia friendly environments, will find the information of this thesis useful in leading in a more comprehensive understanding of these issues. Building upon this discussion a number of recommendations not only for designers and theorists but also policymakers are proposed with the intention of promoting socially and economically sustainable architectural approaches within the dementia field.

Nevertheless, the thesis was conceived during a time of a paradoxical coexistence. The great potential of improved economies, free educational and informational platforms, and better healthcare systems are counterbalanced by the generation of ideological and physical boundaries, individualistic tendencies, securitisation, and spatial segregation that only in part are new while mostly inherited from previous models (i.e. economic models and design models). This, therefore, has been emphasising an exclusion of certain social groups by supporting the "healthy," and limiting the "sick" (Sample, 2012). In this particular study, older adults with early stages of dementia represent them. Open Types, therefore, translate into a work of architecture general principles

that reject functional classification or patternisation to welcome and accommodate respectively a socially inclusive, collaborative, and multi-disciplinary contribution and performance. In this, a renewed ethics of dwelling is revealed.

REFERENCE LIST

Akcan, E. (2018) *Open Architecture: Migration, Citizenship, and the Urban Renewal of Berlin-Kreuzberg by IBA-1984/87.* Basel: Birkhauser GmbH.

Alexander, C. (1973) *Notes on the Synthesis of Form.* Cambridge (MA): Harvard University Press.

Allison, P. (2006) *David Adjaye, Making Public Buildings.* London: Thames and Hudson Ltd.

Borasi, G., and Zardini, M. (eds.) (2012) I*mperfect Health: the Medicalisation of Architecture.* Zurich: Lars Muller Publishers.

Budson, A. E., and Kowall, N. W. (2014) The Handbook Of Alzheimer's Disease And Other Dementias. Oxford: Wiley.

Burdett, R., and Sudjic, D. (2008) *The Endless City*. London: Phaidon.

Carey, M. (ed.) (2016) *Selected Works Michael Meredith, Hilary Sample.* New York (NY): Princeton Architectural Press.

Cassara', S. (ed.) (2006) *Peter Eisenman. Feints.* Milan: Skira Editore.

Curzer, H., J. (2012) *Aristotle and the Virtues.* Oxford: Oxford University Press.

Cutler, L. J., and Rosalie, K. A. (2009) Post-Occupancy Evaluation of a Transformed Nursing Home: The First Four Green House® Settings. *Journal of Housing for the*

Elderly [on-line], 23, pp. 304–334. DOI: 10.1080/02763890903327010. [Accessed: 27th October 2016].

Davis, S., Byers, S., Nay, R., & Koch, S. (2009) Guiding Design of Dementia Friendly Environments in Residential Care Settings: Considering the Living Experiences. *Dementia* [on-line], 8(2), 185–203. DOI: https://doi.org/10.1177/1471301209103250 [Accessed: 25th February 2020].

Dunne, A., and Raby F. (2013) *Speculative Everything: Design, Fiction and Social Dreaming.* Cambridge (MA): MIT Press.

Eco, U. (1989) *The Open Work.* Cambridge (MA): Harvard University Press.

Eisenman, P. (1963) *The Formal Basis of Modern Architecture.* Ph. D. Thesis, University of Cambridge.

European Union (ed.) (2015) *The 2015 Ageing Report. Economic and Budgetary Projections for the 27 EU Member States (2010-2060).* Brussels: European Commission.

European Union (ed.) (2016) *The Impact Of Demographic Change On European Regions.* Brussels: European Committee of Regions.

Fesmire, S. (2003) *John Dewey and Moral Imagination. Pragmatism in Ethics.* Indianapolis (IN): Indiana University Press.

Foucault, M. (1984) Of Other Space: Utopia and Heterotopias. *Architecture/Mouvement/ Continuite* [on-line] 5, pp. 46-49. Available at: http://foucault.info/documents/ heterotopia/foucault.heterotopia.en.html [Accessed: 15th February 2017].

Geddes, P. (1915) *Cities in Evolution: an Introduction to the Town Planning Movement*

and to the Study of Civics. London: Williams & Norgate.

Goodsell, C.T. (1988) *The Social Meaning of Space.* Lawrance (KS): University Press of Kansas.

Harries, K. (1997) *The Ethical Function of Architecture.* Cambridge (MA): MIT press.

Harvey, D. (1985) *The Urbanisation of Capital: Studies in the History and Capital Urbanisation.* Baltimore (MD): Johns Hopkins University Press.

Harvey, D. (1996) *Justice, Nature, and the Geography of Differences.* Cambridge: Balckwell.

Harvey, D. (2001) *Space of Capital. Towards A Critical Geography.* Edinburgh: Edinburgh University Press.

Hasegawa, G. (2011) *Thinking, Making Architecture, Living.* Tokyo: Lixil.

Heatherwick, T. and Rowe, M. (2015) *Making.* London: Thames and Hudson Ltd.

Heidegger, M. (1971) *Poetry, Language, Thought.* New York (NY): Harper and Row Publishers.

Heidegger, M. (1993) Building, Dwelling, Thinking. In: Krell, D. (ed.) *Basic Writings.* London: Routledge, pp: 239-256.

Hetherington, K. (1997) *The Badlands of Modernity: Heterotopia and Social Ordering.* London: Routledge.

Himes, A. (2019) The Embedded Politics of Types: Sedad Hakki and the Turkish House [on-line] *The Journal of Architecture* 24 (6), pp: 756-774. DOI: 10.1080/13602365.2019.1684972 [Accessed: 25th February 2020].

Illies, C. and Ray, N. (2014) *Philosophy of Architecture.* Cambridge: Cambridge Architectural Press.

Jacobs, J. (1969) *The Economy of Cities.* New York (NY): Random House.

Kahn, L. I. (1998) *Conversation with Students.* New York (NY): Princeton Architectural Press.

Koolhaas, R. (1994) *Delirious New York: A Retroactive Manifesto for Manhattan.* New York (NY): The Monacelli Press.

Landi, D. (2017) Towards New Architectural and Urban Typologies: Thinking, Making and Living as a Post Occupancy Evaluation Method. *Conscious Cities Journal* [online] 3. Available at: http://www.ccities.org/towards-new-architectural-urban-typologies-thinking-making-living-post-occupancy-evaluation-method/. [Accessed: 27th January 2018].

Le Corbusier (2007) *Toward an Architecture*. London: Frances Lincoln Ltd.

Levy, B. R. (2017) Age-Stereotype Paradox: Opportunity for Social Change. *The Gerontologist* [online] 57 (S2), pp. 118-126. DOI: https://doi.org/10.1093/geront/gnx059. [Accessed: 18th September 2018].

Loos, A. (1998) *Ornament and Crime Selected Essays - Studies in Austrian Literature, Culture, and Thought.* Riverside (CA): Ariadne Press.

McAllister, C. L., and Silverman, M. A. (1999) Community Formation and Community

Roles Among Persons With Alzheimer's Disease: A Comparative Study of Experiences in a Residential Alzheimer's Facility and a Traditional Nursing Home. *Qualitative Health Research* [on-line], 9 (1), pp. 65-85 [Accessed 7th July 2017].

MetLife (ed.) (2013) *Liveable Community Indicators for Sustainable Aging in Place. The MetLife Mature Market Institute.* New York (NY): Stanford Centre on Longevity.

Moneo, R. (1978) On Typologies. *Opposition* Issue No 13, pp. 24-45.

Moneo, R. (2010) *Remarks on 21 Works.* New York (NY): Monicelli Press.
MOS (2019) *MOS Architects.* [online], Available at: http://www.mos.nyc/ [Accessed: 24th January 2019].

Mostafavi, M. (ed.) (2017) *The Ethics of the Urban: the City and the Space of the Political.* Zurich: Lars Muller Publishers.

Picon, A. (1988) *French Architects and Engineers*. Cambridge: University of Cambridge Press.

Ray, N. (ed.) (2005) *Architecture and its Ethical Dilemmas.* London: Routledge.

Rossi, A. (1982) *The Architecture of the City.* Cambridge (MA): MIT Press

Rowe, C., and Koetter, F. (1978) *Collage City*. Cambridge (MA): MIT Press.

Sassen, S. (2014) *Expulsions: Brutality and Complexity in the Global Economy.* Cambridge (MA): Harvard University Press.
Sennett, R. (2004) *The Fall of Pubic Man.* New York (NY): Penguin Books.

Sennett, R. (2018) *Building and Dwelling. Ethics of the City.* London: Penguin Books.

Tafuri, M. (1976) *Architecture and Utopia. Design and Capitalism Development.* Cambridge (MA): MIT Press.

OECD (2015) *Ageing in City.* Paris: OECD Publishing.

OECD (2015) *Pensions at a Glance 2015.* Paris: OECD Publishing.

OECD (2017) *The Next Production Revolution.* Paris: OEDC Publishing.

OECD (2018) *The Integration of Migrants in OECD Regions.* Paris: OEDC Publishing.

Venturi, R. (1972) *Learning from Las Vegas.* Cambridge (MA): MIT Press.

Vitruvius (1914) *The Ten Books on Architecture*. Cambridge (MA): Harvard University Press.

Van der Voordt, D.J.M., Hoogdalem, H., and H.B.R. van Wegen (1985) Comparative Floorplan-Analysis as a Means to Develop Design Guidelines. *Journal of Environmental Psychology* [on-line], 5 (2) pp.153-179. DOI: https://doi.org/10.1016/S0272-4944(85)80015-3. [Accessed: 26th April 2016].

Williamson, J. (2015) *Kahn at Penn. Transformative Teacher of Architecture*. New York (NY): Routledge.

Zumthor, P. (2006) *Thinking Architecture.* Basel: Birkhauser GmbH.

LITERATURE REVIEW

The literature review is composed of three themed sections: Design Dimension, Sociological and Philosophical Dimension, and Medical/Care Dimension. It reflects the cross-disciplinary nature of the study as it illustrates texts by the Historian/Architect Esra Ackan, the Sociologist Richard Sennett, the Historian/Philosopher Michel Foucault, the Architect/Educator Louis Kahn, the Epidemiologist/Academic Lisa Berkman, and Psychiatrist/Academic Germán Elías Berríos. In this, the time of publications and their cross-field arguments which always cover two out of the three mentioned domains (e.g. architecture and sociology; architecture and ageing; architecture and health; and health and sociology) inform the literature review. It is further extended with key publications and authors for each subject such as the Architect/Theoritician Aldo Rossi.

Design Dimension

Conversation with Students (1998) synthetises the core of Louis Kahn's architectural thinking. Accordingly, it is a collection of Kahn's essays, lectures and interviews, together with writings by Kahn. In proposing *Conversation with Students* as a legitimate study for the comprehension of the development of a work of architecture; it presents its argument on the centrality of the intellectual exercise, which lacks of a physical consistency, and thereby it only exists in the mind. Equally, in *Thinking Architecture* (2006) by Peter Zumthor describes the approaches and impressions for the development of a work of architecture. In addition, this publication is a collection of essays and lectures written by Zumthor between 1988 and 2009. It mentions the equal and fundamental roles of rational and objective criteria as well as his memories and images for the thinking of a piece of architecture. On the one side, these memories and images are connected to his professional experience gathered since the author was training as an architect. On the other side, other images and memories come from his childhood when he could experience architecture without thinking about it. At the same time, it considers the making of space that is both readily acknowledged and well documented. Zumthor's proclamation of the making of a piece of architecture, "a

meaningful whole," passes through the construction. It allows buildings to become part of the world, a witness to the human ability to make concrete things made of many parts. Many, however, are the approaches in the professional domain to the thinking and making of a work of architecture besides ideas of materiality, light and atmosphere. This publication is also contemporaneous to *Thinking, Making Architecture and Living* (2011). In precision, the author analytically reveals the aspects characterising Go Hasegawa and Associates' architectural design process through their early projects. It is possible to distinguish three different phases. The thinking, which revolves around the use of physical models and their ability in stimulating questions in order to figure out what should be done. In this phase, Go Hasegawa describes how they deal with an overwhelming amount of information and relationships with countless contexts such as history, culture, the city, the sun, the earth and the life, function and technology and materials. All of these elements are successively combined together through the pragmatic phase of making. This is an architectural language which allows a space to come into dialogue with natural environments and people's lives. Materials and techniques influence the space. It becomes an architectural space capable of expanding people's physical sensations. The last phase, the living, considers interactions that give movement to the built environment as a whole. The author, therefore, discusses the possibility of creating pleasure through their projects, a pleasure generated by a series of interactions between residents and the projects themselves. Here I can now specifically cite *Notes of the Synthesis of Form* (1973) by Christopher Alexander. The author makes the case for defining architectural design as a self-conscious process. In so far, Alexander's thesis discusses the possibility of an equilibrium between forms and contexts; contemporary context, which is more complex and less stable than the past. In this, the author attempts to illustrate to two different design processes that have informed the built environment over time. On the one side, there is the process of unconscious cultures. It is characterised by slow traditional forces, and thereby able to generate properly adapted forms. On the other side, there is the process of

self-conscious attitudes of designers. Consequently, forms are the results of designers' attempts for a comprehensive understanding of the functional and programmatic problem. However, this contemporary complexity and instability has determined a simplistic understanding, which has introduced a certain arbitrariness. In the second part of the book, therefore, Alexander suggests a design method, supported by a mathematical rigour, that fosters imagination and reduces the risks of a simplistic interpretation the contemporary contexts. The author frames the necessity of a shared symbolism - language or patterns – to question more traditional architectural concepts while generating a new one. Consequently, a work of architecture is the outcome of a design process. In this study, the design as a process is considered composed by three persistently present verbs: thinking, making, and living. While these verbs delineate three different phases, I can argue that they are also necessary for a rounded comprehension of a work of architecture.

This allows me to introduce a methodology adopted in this study. It clearly falls in a specific theoretical framework of research methodology for the evaluation of existing buildings. However, it establishes parallels between professional practice and research. Specifically, the methodology is based on the Post Occupancy Evaluation (POE) framework. The first example of POEs is identifiable in the *Plan of Work for Design Team Operation*. This policy was introduced by the Royal Institute of British Architects in 1963. The document shows how the quality and sustainability of a building could be increased through a Post Occupancy Evaluation method as an additional part of the project delivery able to provide design assessments. But to state this I must consider more recent publications such as *Assessing Building Performance* edited by Preiser, and Vischer (2005). This book describes and illustrates a human-centred process, which is a logical and reusable process for planning, designing, building and managing new buildings based on the evaluation of the existing ones. In part 1 and 2 of the book, all of the book's contributors highlight how delivery and occupation of conventional buildings

present negative characteristics such as "disjointed, cost-driven, time-limited, conflict-ridden, and ignorant." Part 3 of the book, instead, is essentially characterised by a collection of case studies, while some of them illustrate tools, methods and references highly contextualised. Some others provide analytical methods and techniques that can more easily be generalised and thereby used in multiple conditions and contexts.

At the same time, in the paper *Feedback, Feedforward and Control: Post Occupancy Evaluation to the Rescue* (2001), Preiser argues about the importance of Post Occupancy Evaluation method in contemporary society. The economic model has changed from a hierarchical, mechanical and static structure to a dynamic, living and evolving one. Self – regulating principles implementing knowledge and creativity represent the additional value of a continuously evolving society. The author describes the POE as a tool for supporting the extremely subjective and aesthetic-based construction industry in shifting from supply-led to demand-led. Lastly, Preiser introduces the POE as a more mainstream method in government, industry and academia in order to evaluate building in a more objective manner.

Furthermore, the exploration of Uwe Flick and his book *Introducing Research Methodology* (2011) provides a comprehensive overview of social research. The author organises his publication in four parts analysing all the aspects that compose a social research. In the first instance, Flick describes the central importance of social research and its ethical issues, and he concludes the first part with a detailed illustration regarding the development of good research questions from research ideas: the research question that must focus on a narrow single aspect. The second part is devoted to the research process: the literature review, the definition of the research method as a tool for collecting data and the planning of social research. The third part critically reviews the different type of social research, which are qualitative and quantitative research, mixed method and online social research. All of the above

mentioned methods provide different kinds of data. For example, qualitative research provides insights, reveals latent meanings of the analysed situations. On the other side, quantitative research produces quantitative data that can be elaborated in terms of a chart or matrix. The last part provides tools for self-evaluating one's research project and the use of the collected data. This overview on social and post occupancy research methods now offers a more rounded theoretical background that underpins the research methodology which is employed in this study and later extensively illustrated. It does not just mix different analytical tools such as architectural/visual representations and qualitative interviews or questionnaires. Instead, this combines a collection of mini-investigations that together produce an alternate knowledge. The methodology will be applied to a number of international case studies, which are located in different European countries and beyond, including Japan. The collected data will support the argumentations of this study. They aim to tackle challenges, which are posed by existing social and economic segregation patterns that affect older adults diagnosed with the early stages of dementia. The data, therefore, will be used to renew the notion of architectural types.

This territory is abundantly predicated in the seminal book *The Architecture of the City* that is presented by Aldo Rossi (1982). The author approach to the typological approach to produce forms of architecture and thereby the city free from gratuitous inventions. Types are the general principles that reject repetition. Forms of architecture, therefore, come after and are subject to infinite variations, which are informed from peculiar contexts and time. While the risk of functional monotony is avoided, types ensure a continuity with the collective intellect and collective memory to the making of a work architecture. This transforms a simply functional space into a vibrant and vital space. The city benefits from this. Consequently, 'types' together with 'events' become the generative forces of the city. Types and events translate the mutations of reality. In such condition, the city is not just a collection of functional objects, although it becomes

participatory, emotional and effective. In writing this, Rossi challenges conventional way of describing and making architecture or urbanism, and invites us to reconsider its subjects' roles such as the one of architects.

This was also spearheaded by Thomas A. Markus in *Buildings and Power: Freedom and Control in the Origin of Modern Building Types* (1993). While deeply different from Rossi's arguments, Markus' theoretical position shares a critique to the narrowness of the pragmatic purpose of functionalist labelling of buildings. Functional labels are able to describe predictable forms consequent of artistic, economic or investment thoughts, neglecting the evident social role of buildings. Consequently, the book attempts to untangle the architectural complexity of buildings through their social meanings. To do this, Markus proposes a typological analysis of a portfolio of buildings designed between 1759 – 1850. According to three main categories buildings and people, buildings and knowledge, and buildings and things, the author explores the social context in which a building is located to question its formal language and traditional classification.

Similarly, Jane Jacobs largely criticised the naïve functionalism at the urban scale. In her most popular work, *The Death and Life of Great American Cities* (1961), Jacobs untangles her critique on urban strategies such as zoning and single use development, which are expressions of economic forces and their requirements of efficiency. Inevitably, the city becomes inert, and homogeneous. This may lead to an expulsion of their occupants. The book, therefore, proposes a paradigmatic shift in urban design, the "Open City." According to Jacob, Cities are not pieces of art and thereby the author acknowledges the active contribution of citizens in the making of a city. In this, a notion of liveable, intense and diverse cities emerges. While the "Open City" rejects simplistic functional urban models, it embodies the layered complexity of cities, and is able to provide something for everybody. In her writings, the author frames some fundamental elements for the preservation of cities' diversity. The streets and sidewalks, for

example, are described as "the most vital organs" of cities that must not just used by wheeled transportation. On the other hand, neighbourhoods and parks are analysed as an expression of civilised self-government, capable of facing its problems and "not being destroyed by them." Over time, however, urban strategies such as zoning and single use development have proliferated. In an ageing society, the phenomenon of retirement villages is an outstanding example. They are geographically located in climatically and economic favourable areas and have strong age restrictions.

In the book *Young-Old – Urban Utopias of an Ageing Society* (2015), Deane Simpson investigates some of these "retirement utopias" to inform urban design theories. Deeply different from Jacobs' critique, Simpson aims to understand if the existing urban environment satisfies the requirements of a new social/age groups: the "young-old." Simpson considers a series of emblematic urban retirement villages/utopias of the twentieth century such as the Huis Ten Bosch, a Japanese Retirement Village, and the Senior Recreation Vehicle Community (SRVC). The first one emulates a Dutch city, and the SRVC is a nomadic community of older adults who are full-time travellers on mobile homes. Simpson's arguments while are reviling a critical approach/framework inspired by other urban theorists such as Venturi and Scott Brown, support a wide analysis of real urban settlements dislocated in different countries such as Japan, USA, and European examples. While revealing their negative aspects such as segregation patterns, the analysis drives the author in distilling a piece of urban theory by tackling the ageing population challenge.

From this, it follows, to conclude, that we are living in a society anxious about smog, food safety, pollution and ageing population. These anxieties affect also design and in particular architecture. In 2012, the Canadian Centre of Architecture curated the exhibition *Imperfect Health: the Medicalization of Architecture*. A book with the same title followed it. It investigated the historical connection between health, design and the

environment, bringing to light the uncertainties and contradictions of a western medicine and the links with the built environment. Consequently, it underlined the centrality and necessity of an urbanism, landscape design and architecture able to take care of their inhabitants instead of curing them. This shift would be possible only by adopting strategies for those transverse different categories, thereby to explore and create multidisciplinary and collaborative ways of working. Going back to the architectural scale, this sets the basis for a theoretical contribution to architecture through a typological analysis, which broadens the fresh theoretical discourse on *Open Architecture*. The historian Esra Ackan introduced the term after her investigation on "latent forms of open architecture" that focused on housing and migration phenomena. In her book *Open Architecture* (2018), Ackan defines "Open Architecture" as "The translation of a new ethics of hospitality into architecture. Open Architecture is predicated on the welcoming of a distinctively other mind or group of minds into the process of architectural design." The author crystallised this notion after a robust critical analysis of speculative projects as well as collective built projects. While projects such as Friedman's Mobile Architecture (1956), Tange's Tokyo Bay Project (1960), and Price's Fun Palace (1961-65) translate notions of flexibility and adaptability of forms against traditional and centralised systems, projects such as the IBA-1984/87 in Berlin translates theories of multiplicity of meaning, democracy and plurality, collectivity and collaborations, transnational solidarity, expansion of human rights and social citizenship.

Sociological and Philosophical Dimension

Thus far, the literature review has been showing an unconfuted relationship between architecture/urbanism and out of date economic patterns besides framing design as a conscious process. This underlines the contemporary, not only social, necessity of new architectural and urban solutions. This problematic is again taken up by Richard Sennett's critique. In particular, the 2018 book *Building and Dwelling: The Ethic of the City* largely speculates and promotes the notion of the "Open City." The author, focusing

on the urban scale, criticises the modern – contemporary city as an expression of a reductive system, a "closed system" which has disabled local innovation and growth in favour of efficiency. The consequence of this status is to expel or reduce in value unconventional experiences, both social and economic. Developing the notion of "open city" based on the concept of "open system" and supported by principles such as "democratic spaces, incomplete forms, development of narratives and passage of territories," Sennett describes urban settlements as complex and dialogical mechanisms able to organise themselves and to generate more participated spaces while suggesting the tools for obtaining it. Several lines of Sennett's arguments suggest that the necessity of new architectural and urban solutions is underpinned by a quest for a renewed version of ethics both at the urban and architectural scale.

In restating the necessity for a renewed ethics and thereby architectural and urban solutions, Harries investigates the possibilities of an alternate architecture that is able to inform again our everyday activities in the book *The Ethical Function of Architecture* (1997). The author refers to the etymological meaning of ethics. It refers to Ethos and thereby to how humans dwell in the world. The book is organised in four parts. The first part, *The Decorated Shed*, introduces the problem. It lies in an aesthetical approach to architectural theories. In this, modern technological achievements and functional determinism have determined a detachment between a work of architecture, history, site, place, and occupants and thereby its aesthetical meanings. In part two, *Representation and RePresentation*, the author acknowledges a problem in the architectural language (i.e. buildings speak to us because of occupants' experience not for particular spatial configurations) to untangle his discussion around an alternate definition of architecture. This analysis is further extended in part 3: *Space, Time and Dwelling*. Harries expands Heideggerian investigation on "Building Dwelling Thinking," "Place and Space," and "Terror of Time." This allows the author to speak about a possible return to an architecture as a stage of the everyday life while refusing the

simplistic character of modernity. Accordingly, the last part, the author proposes common ethos that supports new expression of communal as well as individual life. Surprisingly, Harries limits his revolutionary tone towards a city and an architecture, which only "let us dream of utopia."

Nevertheless, Harries abundantly structures his arguments around secondary sources such as Martin Heidegger. On the one hand, this confirms their concern with the notion of Time. On the other hand, it serves as a point of entry to what Time may represent for this study. Whilst Time is acknowledged in the sense of temporal structures, Time is also interpreted as the contemporaneity and the challenges posed by the contemporary culture. The new demographic structure, the rising number of older adults with long-term conditions, the spiralling cost of long-term healthcare services, and the shrinking household structure, therefore, open the space for a reconsideration inside the social and demographic structures of our contemporary society. It is a field of study claimed by the book *A Fresh Map of Life* (1989) that was given for its first instance by Peter Laslett. As much as its focus of attention can be designated as the definition of the "Third Age" and the British establishments that should support it, this book is the expression of a well-documented study, supported by fine references and data coming from an international comparison between western countries, and eastern countries such as Japan. The author, in the 13 chapters, which characterise the publication, focuses on the potential opportunities of the "Third Age" rather than on the health problem that might restrict their activities. Laslett, aware of the strong differences among older people, does not define a specific age frame but a segment of life, after retirement, in which a person can quest "voluntary and rewarding activities." This falls within the domain of a new demographic differentiation, already at the hands of Beatrice Neugarten and her *Age Groups in American Society and the Rise of the Young-Old* (1974). The author identifies the "young – old" as that part of the population between 55-75 years old and characterised by retirement. After criticising the modern

society and its segregation patterns, Neugarten questions the possibilities for the "young – olds" as social contributors.

Following this new distinction between age categories, this gives a condition for delineating the trajectory of a different modern and contemporary social structure. Like the Peter Laslett's *Household and Family in Past Times* (1972), his enquiry initially focuses on the understanding of possible comparative evidences that describe the domestic households. This study refers to 100 samples of British community and studies from Western Europe, the United States and Japan. The relation between family structure, socio-economic factors and domestic households is presented inside the context of the preindustrial society and highlights two major conclusions. First, the "nuclear family" has been the most common domestic group that remains. Second, the "extended family" which includes the supportive kinship relations or ties were adopted by certain elite groups or groups in particular economic conditions. This description of what is already there strongly marked a new perspective in the historical study of the family. More recently the changes in the social and demographic differentiation of the population are described in Francois Hopflinger's chapter "The Second Half of Life: A period of Life in Transformation," of the book *New Approaches to Housing for the Second Half of Life* (2008) edited by Andreas Huber. Additionally, Hopflinger argues about how the ageing process has been changing in recent years and how it will change in the future. In detail, the author introduces the shift from the bipartite division between workers and retired older adults, to a quadripartite division considering a series of implications which occur in old age such as dementia. Starting from an awareness of actual demographic development, the chapter and the book underlines the importance of older adults in the real estate market and the production of architectural and urban space.

Revealing parallels between social patterns and the production of architectural and

urban space turns the question on a more latent aspect of this study: the documentation of how social and biological processes affect health and wellbeing of people. I must consider, therefore, *Social Epidemiology* edited by Lisa F. Berkman, and Ichiro Kawachi (2014), which can be said that goes back to the original character of epidemiology, starting from its current state – of – the art. Epidemiology is the discipline that investigates the state of health and its distribution in populations. Consequently, social epidemiology is concerned with the ways in which societies are organised to generate or limit good health. This outlines shared patterns between health (e.g. biological, psychological, neurological, etc.) and social (e.g. discriminations, incomes, social networks, etc.) conditions. So, for example in the chapter "Cognitive Function: Reserve and Resilience," the authors reveal the relationships between social engagement and interaction and the decline of cognitive function in adulthood, in particular, older adults. In other words, social isolation, disconnectedness, disintegration are psychological-ly and neurologically stressful conditions in which an organism responds by ageing faster. Berkman and Kawachi provide to health research and policy makers relevant insight in the comprehension of social conditions where wellness and disease are manifest. Here is a predisposition towards another publication edited again by Lisa F. Berkman, and Ichiro Kawachi: *Neighbourhoods and Health* (2003). These connections between social processes and health are here further elaborated. The book, which describes neighbourhoods as the physical manifestation of communities and their social relationships, centres its attention mainly on minority ethnic groups and poor urban settlements, supported this time also by rich quantitative data. However, the recognition of the condition of the neighbourhood as an influential actor on ageing is evaluated in the chapter "Neighbourhoods, Aging, and Functional Limitations." Furthermore, this part describes how the physical and social settings of a neighbourhood affect older adults' health conditions such as their cognitive and physical impairments.

However in a context that provide space for potential alternate architectural and urban

solutions, I must further acknowledge an inadequacy of modern ambitious prescriptive ordering. This gives access to the theoretical contribution on the notion of Heterotopia. Michel Foucault first introduced the term in the 1967 paper *Of Other Space: Utopia and Heterotopias*. The author loosely investigated projects such as "cemeteries" and "boarding schools" to extract the principles that define a heterotopic space. Nevertheless, Foucault's approach to Heterotopia was largely criticised due to its lack of consistency. Here, therefore, I can specifically refer to the more recent publication *The Badlands of Modernity* by Kevin Hetherington (1997). The author takes three case studies such as the Palais Royal in Paris during the 1789 French Revolution, the Masonic Lodge and the British Factory in the early eighteenth century to treat dynamics between spatial interplay and the process of alternate social ordering. Hetherington structures his arguments, which are supported by the meticulous description of these case studies in seven chapters. In this, the author provides a stimulating journey, a sociological and philosophical analysis of main concepts such as representational space, margins, paradoxical space, and the anthropological concept of liminality to frame theoretically more comprehensively heterotopic spaces. The Heterotopia, therefore, is something between a space of freedom and constraints, which do not impose a specific social order. This is something deeply different from what is offered by Utopian modernity.

Insofar as illustrated – examination of this might reveal a lack in literature that presents a diverse conceptual definition of architectural types. They are capable of promoting more "democratic and healthy spaces" and strongly reduce existing segregation patterns; based on a critical thinking, making and living of architecture, aware of the contemporary socio –economic conditions.

Medical/Care Dimension
In attempting to account for this as architectural, urban so social necessity, the World Health Organizations (WHO), in its *Dementia. A Public Health Priority* rises attention

onto elsewhere: the economic and social burden connected to this new socio-demographic structure. The report clearly states both economic and social costs not only for the older adults with dementia but also for caregivers and families. Therefore, the WHO once more proposes new tools for the society as a whole in order to promote the development of new social care models. The innovative paradigm of care, as described by the author, puts a strong emphasis on the concept of multidisciplinary collaboration and teamwork from professional to informal caregivers. This, successively, contributes to the promotion of quality of life and reduction of the stigma. Here there is a deliberate attention to the stigma generated against people affected by mental impairments.

In the case of *History Of Dementia And Dementia In History: An Overview* (1998), the authors Francois Boller and Margaret M. Forbes illustrate by providing a wide referenced documentation how dementia has always been present in human being history. The paper reveals insights and perception of dementia in the different centuries that characterised Western history, from the Egyptian to the 19th century. Boller and Forbes describe the evolution of the approach to senile disabilities through the writings of Hippocrates, Aretheus of Cappadocia, the philosopher Roger Bacon until Etienne Esquirol.

While this demonstrates in advance a certain longstanding awareness towards people living with dementia, the senile or young set of dementia, the chapter "Memory and the Cognitive Paradigm of Dementia during the 19th-Century: A Conceptual History" written by German E. Berrios (1990) predominantly combines the medical perspective associated with dementia with an outlook of a historian. Berrios, focusing on the 19th century, considers the stages of the medical process that brought to a developmental definition of dementia. Moreover, the author illustrates how this process has been influenced also by other factors such as the concept of senility itself and the evolution of technologies used for the memory testing. This chapter is part of a publication

that collects 15 years of lectures delivered by relevant contributions to the history of psychiatry: *Lectures on the History of Psychiatry: the Squibb Series* (1990) edited by R. M. Murray and T. H. Turner.

Thus I encounter the keynote publication edited by Andrew E. Budson and Neil W. Kowall: *The Handbook Of Alzheimer's Disease And Other Dementias.* A book to which 30 authors, most of them US based neurologists, contributed. The structure of the book is organised around four parts taking the reader from the Alzheimer's first medical appearance in 1970 to one of its most recent definitions. Besides, the Alzheimer diseases, the authors describe, both from a clinical and pathological perspective, more popular dementia disorders such as vascular dementia, dementia with Lewy bodies, Parkinson's disease, etc. to less common forms of dementia. It is a prominent book in this subject where readers can reference specific information, but the whole reading was overlooked.

The work of Annette Leibing can be presented in conjunction. In particular, the book *Thinking about Dementia: Culture, Loss, and the Anthropology of Senility* (2006) edited by Leibing is a collection of essays written by 19 scholars that, despite the title, focuses on Alzheimer's disease. All of the authors invite the readers through winding journeys to the multiple aspects associated with the concept of senility. In this discourse, history, philosophy, culture, psychology support the contributors in defining what senility might represent in the contemporary context, underlining the transient character of the diagnostic tools. This publication confirms the longstanding cultural meaning of Alzheimer's disease and the gap between it and its fragmented medical and biological understanding. This duality between the medical/diagnostic and cultural facets of senility, according to the authors, has shaped the attitude towards the of older adults' cognitive decline of all the subjects involved (i.e. family, caregivers, and older adults themselves). This has been stoking incomprehension among different age

categories but also within the same age category; ambiguity about which conditions are pathological or not. In the final chapter, Leibing opens the discourse up to the eastern perception of senility. The author analyses the Japanese concept and cultural meaning of dementia, therefore its challenges and moral responsibilities.

Within such a framework seems now to be clearly at stake the challenge of the stigma and the segregation patterns. However, if we redistribute the emphasis within the care model, it is now possible to begin an inquiry into the relationship between older adults, families and caregivers. *Dementia Care A Practical Approach* (2016) promotes sustainable strategies, a combination of strategies touching the various fields, as explored in the chapters of the book. Grahame Smith edited a publication that underlines the importance of person-centred approach as well as a partnership of different caregivers, professional or informal, in order to let the people "live well with dementia". This is a "day to day challenge" for all the people involved. Each chapter is grounded in actual and significant social policies, strategies and research, and its contents are strengthened by a hypothetical scenario. In this holistic publication, particular attention is given also to the role of technology and the built environments that are both fundamental for safety and wellbeing of individuals.

This is a necessity of societies and communities capable accommodating older adults with cognitive impairments. This necessity can be found in *Lost in Space* (2014) co-authored by Eckhard Feddersen and Insa Lüdtke. The book provides a heterogeneous collection of essays and interviews from different professionals such as architects and interior designers, and scholars such as gerontologists, psychologists and musicians. Such diverse facets bring a differentiated light on the same subject: dementia and the sensorial experience of the people affected. This is integrated with a critical analysis of architectural projects disseminated in different parts of the globe. As before, the authors' attention is directed to entire system, so people subject to

dementia. "Only one person is ill but many are affected," whereby the concepts of "caring communities" and an "age-friendly culture" assume dominance in order to promote sustainable care models. Care models able to include older people in the socio-economic and cultural discourse and professional carers are flanked by families and socially committed members of society.

In that, Mike Jay's construction *This Way Madness Lies* (2016) provides a journey through the evolution of the mental health institutes in different epochs. Besides the acquired labels in the centuries such as madhouse in the 18th century, asylum in the 19th century, mental hospital in the 20th century and the post-asylum in the 21st century, the book is a critical insight also on the treatments and injustices on people with mental and physical impairments such as older adults. All of these aspects are mainly described in the context of St Mary of Bethlehem hospital, known as Bethlem hospital. Founded in 1247, it is described as an archetype of mental health institutions, also from an architectural point of view through the use of charming representations. In particular, the author writes about Geel in Belgium. Starting from its mythological/religious origins, he goes through the community care model and its evolution in parallel to the evolution of the city. In the Geel's experience, we can assume and find a primitive model, a communal approach to a very contemporary challenge identified in the previous paragraphs. This is completely different perspective from Erving Goffman's book *Asylum* (1991). The author speculates on the concept of "total institutions," facilities which do not look for "cultural victories," detached from the world and able to fill the gap between domestic and medical environments for the benefit of the professional caregivers.

While the three dimensions generate a robust framework that defines more clearly this interdisciplinary research apparatus, the study must now put its attention on the methodology already deployed which is necessarily composed from such diverse

system of knowledge. The new and original kwoledge that is accrued by using this methodology provides us with information on new forms of collective lives. They results from new ethics that concern with the notion of dwelling and the value of the common. Since the persistent twentieth-century urban and architectural strategies being devised throughout the study are under pressure by a wide range of societal changes (i.e. people are living longer and therefore there has been an increase in age related conditions such as dementia; the potential increase in demand for high dependency related services, and their impact upon health and social care budgets; and difficulties in defining a clear dividing line between normal ageing and pathological ageing), they have led to stigmatisation and segregation of older adults as a social and economic burden. These of societal changes, however, have informed also a few architectural examples that attempt to adopt innovative care models. If we consider Architecture as a practical and conscious answer to a posed unconscious problem. As such, these few architectural examples set the basis for a theoretical contribution to the nascent theoretical discourse on "Open Architecture" through a typological analysis.

METHODOLOGY

This chapter of the thesis presents the methodology of the research, focusing on the two stages that led to adopting this methodology. The first part provides a critical insight into the theoretical background in which the methodology is underpinned. In particular, it attempts to identify the state of the art in the Post Occupancy Evaluation Methodology (POE). The second part extensively illustrates the method. Throughout this section, the term method refers to the activities such as literature review and ethical approval carried by the PhD student in order to develop a tailored methodology. Whereas most of the books on architectural theory and history conventionally employ established architectural or social theory methodology, the diverse system of knowledge (i.e. architecture, social/phylosophical and medical/care sciences) requires a methodology that expands narratives around a work of architecture to the experience of dwelling. The methodology is then applied in the analysis of the case studies. It is necessary here to clarify exactly what is meant by case studies. They are works of architecture, which respond to specific requirements:

1_Each case study is a contemporary environment as defined above sited in a nation where its population presents a new demographic and household structures. Furthermore, these nations have been characterised by the rise of a new age group such as the Third Age (Laslett, 1989), and thereby governments have adopted new socio-economic policies such as a long term care insurance schemes. This criterion aims to contain the study geographical areas into what can be defined as most developed countries. Nevertheless, the 2008 economic crash strongly impacted on the economies of these countries. Therefore, the above mentioned socio-economic policies have difficulties in being effective (Interview Landi, 2017; Interview Landi, 2018; Mostafavi, 2017).

2_The case studies are a manifestation of environments that do not necessarily establish an optimum expression in terms of design quality. Nowadays, many projects embody

a focused response to the requirements of organic ageing or dementia. However, they lack the sense of spatial control and aesthetic consistency expressed in the discourse surrounding high architecture. This high architecture instead very often fails objective scrutiny against the received wisdom of more liveable environment. Consequently, this criterion attempts to not exclude from the study unconventional architectural projects which might not satisfy principles characterising the two illustrated domains.

3_The selected case studies are examples of novel environments dedicated to Third Age (Laslett, 1989). They are unique architecture strategies which provide an innovative vision for typologies or challenges related to the ageing population, including people living with dementia. In particular, they propose strategies that foster integration with surrounding communities. Residents, therefore, are still able to behave as active socio – economic figures besides any physical and mental impairments. In fact, they are physical environments that act as stages for cross generational encounters. Therefore, older adults preserve their social engagement and inclusion in the community/society for a longer period.

4_ The case studies have recently embedded innovative care models. They effectively translate the emphasis put by The World Health Organisation (WHO) (2012) on a collaborative partnership between different categories of care providers, professionals, communities' residents and volunteers. Additionally, these innovative care models tackle some of the professional and socio-economic challenges (i.e. long working hours) peculiar unique to the older adults' care provision.

These requirements have driven to the identification of three case studies: the Humanitas© in Deventer (The Netherlands), the Gojikara Mura© in Nagakute (Japan), and the Rudolf© in Helsinki (Finland). They were designed and built between 1964 and 1987, while adopting an innovative care paradigm since the 2010s. The architectural

designs become one of the participants of this study. Consequently, it is possible at this moment to state that the focus is on architectural types toward an engagement with innovative and social and economic inclusive design strategies rather than a specific scale. Additionally, attention has been put toward the critical and inductive logic of descriptive and thematic research. This is able to capture a pattern within the collected data in relation of the research questions (Braun and Clarke, 2006) rather than a deductive format of a conventional manual of dementia- or ageing-friendly environments. Furthermore, the international nature of this study inevitably requires the explanations of certain cultural and ethnographical notions. However, it is also important to clarify that this thesis does not aim to describe a collection of ethnographies. From this, it follows, to anticipate my conclusions that this thesis attempts to document the selected phenomena (case studies) and to provide an innovative and comprehensive critical theory of architecture (Flick, 2011). It emerges from a specific people-based evaluation tool adopted here. This critical theory shifts the historical focus of the architectural typology on functional taxonomies (Markus, 1993) to the self – adjusting process (Alexander 1973) which is direct consequence of the contemporary socio-economic context. Therefore, the thesis aims to answer the following question: if the new social-demographic category emerged in the most developed eastern and western countries is represented by "Young – Old" (Neugarten, 1974) – who present an increasing percentage of early stages of dementia – do the existing urban and architectural correlates allow them to still be active economic and social contributors? In evaluating the case studies, the target is both to identify singularities of those design strategies and to broaden them beyond the ageing population and challenges of living with dementia after a pragmatic interpretation.

The Methodology: The Post Occupancy Evaluation (POE) Theoretical Framework

The Post Occupancy Evaluation methodology is a research methodology, which takes

into consideration a building's performance in relation to expectations, behaviours, needs and lifestyles of its occupants (Preiser and Vischer, 2005). Therefore, the adopted research methodology for this study borrows analytical tools, which fall in the theoretical and vocational category of Post Occupancy Evaluation studies. In particular, the one-time Post Occupancy Evaluation methodology (Cutler and Kane, 2009). Conventionally, this methodology attempts to influence the vast, complex built environment system characterised by different actors (Zimring and Reizenstein, 1980). Additionally, it usually focuses on a single aspect of design settings. In fact, it measures relationships and provides observations on how properly the building or space performs after its occupation (Cutler and Rosalie, 2009).

Historically, a first precedent and introduction of POEs is identifiable in the Plan of Work for Design Team Operation, which is a policy of the Royal Institute of the British Architects (RIBA, 1963). This policy considered the Post Occupancy Evaluation tool as an additional part of the project delivery focusing on design assessments in order to improve the quality and sustainability of buildings. Nevertheless, the different figures of a design process would rarely pay for a correct assessment. Consequently, just a decade after, in 1972, the Royal Institute of the British Architects (RIBA) withdrew this evaluation tool. In the 1970's, a first assessment tool was adopted in North America for evaluation of a group of military facilities. Furthermore, the first academic publication, which took into consideration the importance and adoption of experimental evaluation tools, is dated back to 1961. However, academic institutions were still not interested in them while supported more pragmatic and objective methodologies (Preiser and Vischer, 2005).

On the one hand, a search of the literature revealed few studies which analyse post-occupancy specific design aspects and less have conducted in ageing and dementia friendly architectures (Cutler and Rosalie, 2009). On the other hand,

Anderzhon, Green and Fraley (2007) recognise the availability of scientific data on aged people friendly architectures, although they are not properly documented for crosswise projects. Additionally, these aged and dementia-friendly environments rarely consider and acknowledge expectations, behaviours, needs and lifestyles of the people who generally occupy them (Preiser and Vischer, 2005). For example, a 2012 publication about 26 older adults care facilities from several countries such as Australia, Japan, Sweden, Denmark, the Netherlands, the United Kingdom and the United States investigates the impact of the built environment on the care provision. They represent precedents of "people centred design" which foster residents' sense of belonging to the communities in which the case studies are sited. In particular, this study evaluates aspects such as the vernacular design, the philosophy of care, the belonging to a community, innovation, neighbourhood integration, community involvement, the human resources, the environmental sustainability, outdoor living (Anderzhon et al., 2012). Furthermore, the post occupancy evaluation framework may have different time scales. For example, a one-time post-occupancy evaluation is represented by the Noreika, Kujoth, and Torgrude (2002) study. They focus on a specific room of dementia-friendly environments: the bathroom. The principal analytical tool was a survey in which 17 professional care-givers took part. A longitudinal post-occupancy evaluation, instead, is the three-year analysis of Woodside Place. It is a 36-resident dementia facility. The investigation provides an insight into the relationship between built environment, the programme of the facility, the social experience, the informal care-givers' satisfaction, and residents' wellbeing. This study evaluates nine specific aspects: "acknowledging privacy and community, flexible rhythm and patterns, small group size, caregiving and family relationships, engaged wondering, alternative wayfinding system, independence with security, residential qualities and focused and appropriate stimulation" (Silverman et al., 1996). The 55-residents' Australian cottage post occupancy evaluation is a further precedent, which investigates a specifically designed dementia facility. In particular, this study analyses the impact of the new

facility on residents by untangling the relationship between the built environment and their social engagement. The investigation lasted for a period of eight months during which the research team led workshops with the residents, did behavioural mappings and time samplings (Smith, Mathews, and Meredith, 2010).Nevertheless, no previous study has investigated cross-generational settings. Cross-generational settings is the terms that indicates facilities which embody the four principles above.

From this is possible to synthesise three main aspects that characterises a Post Occupancy Evaluation (POE) methodology in terms of both results and levels of investigation. On the one hand, the results have "generality; breath of focus; and a time of application" (Zimring and Reizenstein, 1980). First, a Post Occupancy Evaluation (POE) provides results, which can be generalised. This is conventionally related to the analysed settings. Second, Post Occupancy Evaluation (POE) findings generate a "breath focus" of the analysed settings, which concerns their specificity or a wider context. Third, a Post Occupancy Evaluation (POE) produces results, which are available immediately or are a consequence of a long time compilation. Designers can use them at a later time. On the other hand, the levels of investigation provides: "an indicative review; an investigative review; and a diagnostic review" (Preiser and Vischer, 2005). In particular, the "indicative review" generates a snapshot of the analysed settings. It reveals weaknesses and strengths of settings through questionnaires and superficial visits. The "investigative review" adopts more rigorous research tools such as occupants' interviews, questionnaires, and focus groups. This produces an in-depth insight of the analysed settings. The "diagnostic review" combines users' feedback with quantitative data from acoustic, thermal, light analyses. A Post Occupancy Evaluation methodology embodies all of these aspects. It becomes, thereby as, "simple as possible but not simplistic; rapid to use and administer on site, with speedy turn – round results, applicable in a wide range of building types; practical with a real world emphasis; relatively cheap, and produces factual data which are well

presented and easy to interpret (Preiser and Vischer, 2005, pp. 77).

To ensure the project continued to preserve parallels with the architectural profession, and is grounded within the chosen Post Occupancy Evaluation Methodology theoretical background, it is divided into three parts: "thinking, making and living." These confirm a professional practice and research where the idea of architecture and urbanism can be understood through the present verbs constituting a design process (Landi, 2017). Each part adopts and combines analytical tools borrowed from Post Occupancy Evaluation Methodologies for an indicative review and investigative review (i.e. behavioural mappings) (Cutler and Rosalie, 2009) and from other qualitative research methodologies (i.e. qualitative interview) (Flick, 2011). This characterises a research methodology, which has to be easy and rapid to use according to the time frame of a case study's visits. Therefore, the methodology provides a three-level analysis that generates richer qualitative data. They attempt to produce an insight of the relationships between the built environment and of the care model. In particular, the research methodology evaluates the impact of this relationship upon the quality of care grounded on the interaction between residents, volunteers, families and staff. The three parts, thereby, investigate the physical forms, their spatial/sensorial perception and their impact on care models and residents' experience and wellbeing (Landi, 2017). This contextualises and characterises the research methodology by widening the assessment process from the comprehension of design choices and visions to inhabitants' experiences. The international nature of the study requires a no standardised Post Occupancy Evaluation Methodology that overwhelms cultural differences (Preiser, 2001).

Thinking phase

This phase attempts to provide an insight into the conceptual design process and the case study care model. A systematic study of all the available publications such as

books, academic papers, architectural magazines, YouTube© videos and websites about the three case studies: the Humanitas© in Deventer (The Netherlands), the Gojikara Mura © in Nagakute (Japan), and the Rudolf© in Helsinki (Finland) allows the care philosophy and corresponding architecture to be understood. This part of the analysis does not put attention on "micro – elements" such as furnishing, materials, fixtures. They are not omitted but they are not central in the argumentations of this thesis. This phase, though, evaluates "macro – elements," buildings as a whole such as its legibility and its use. Qualitative interviews and semi-structured questionnaires to managers and architects (1 manager and 1 architect) support the literature review. The limited resources, time and workforce impose the purposival sampling of the participants according to the following criteria. In this, the experience and guidance of the gatekeepers are central (Guarte and Barrios, 2006):

Managers

Inclusion criteria for interviews/semi-structured questionnaires are (a) a male or female aged over 18 years old; (b) manager at one the Case Study more than one year.

Architects

Inclusion criteria for interviews/semi-structured questionnaires are (a) a male or female aged over 18 years old with a master in Architecture or Urban Design (b) leader or member of the design team who designed one of the case studies (See Appendix).

Making phase

This phase attempts to describe the actual physical setting of the case studies. The methodical evaluation and description of the current physical settings provide full comprehension of the design outcomes produced by architects. This part of the

analysis does not focus on design standards, policies and regulations (i.e. age and de-mentia-friendly standards available in the literature). Once again, they are not omitted but they are not central in the arguments of this thesis. Nevertheless, this underlines vulnerabilities and strengths of the case studies.

The key analytical tool is the on site survey of case studies (Lewis, 2015). This generates consistent primary data such as photograph archives in order to describe the quality of the spaces. The on site survey reveals the relationship between the built (indoor and outdoor space), the surrounding context, and people (residents, professional caregivers and volunteers). The visit puts attention on proposed care activities, programmes and their spatial implications (i.e. distances, natural light, privacy gradient, vegetation, etc.). By applying the "serial vision" notion:

To walk from one end of the plan to another, at a uniform pace, will provide a sequence of revelation which are suggested in the serial drawings opposite, reading from left to right. Concerning about the position of our bodies in the space and their relationship with it.

<div style="text-align: right">Cullen, 1971, p.17</div>

This sequence of photographs that move through a case study critically and thematically describes it. The analysed themes are the spatial continuity, the scale, the typology, the natural lighting, the focal points, the "privacy gradient" (Alexander et al., 1977), outdoor rooms and indoor landscapes. In particular, the spatial continuity, the scale and the typology evaluate prevalently visual characters of the case study. They concern also the possible implications on the care model/philosophy, proposed activities, and surrounding contexts (i.e. distances, pedestrian sidewalks, public and private transportation services and access, and interaction with communities) (McGlynn et al., 1985). The natural lighting theme assesses the presence and the role of the natural light

in private and common spaces (i.e. skylights and windows dimensions and iterations). The focal points identify paths and intersections between paths; and the landmarks, spaces or materials that have a visual and tactile characters, which work as points of reference for users, carers and employees. Additionally, it evaluates the "hard and soft areas" of each case study. McGlynn et al. (1985) defined "hard areas" as the spaces able to preserve their function during the years (i.e. staircase, elevator, and vertical service duct), while "soft areas" are the spaces that present high degrees of flexibility with a possibility of customisation. Furthermore, the privacy gradient evaluates the spatial sequence from the entrance and the most public spaces to the most private ones (Alexander et al., 1977). Consequently, this reveals the relationship between the provided spaces and the occupants' social and relational patterns. The spatial composition has direct implication on occupants' sensorial experience. For example, a meticulous sound diffusion may act as a social incentive for the inhabitants, as well as disturbing noise if not properly designed. The outdoor rooms and indoor landscapes investigate connections and accessibility related to interior and exterior spaces (i.e. formal and vegetable gardens) as well as the eventual presence of enclosed outdoor environments (i.e. courtyards). Attention is put on the physical and sensorial experience as a whole such as the sight, taste and smell.

Post-field work analyses the case study through the available design tools produced by the design office such as plans, sections, schemes configurations, etc. The description of the case study is extended through the realisation of further materials such as infographic representations of knowledge or data, conceptual schemes, analytical drawings such as collages (Simpson, 2015). Photographs suggest the action, plans present the architectural settings, diagrams indicate the movement of the occupants (Tschumi, 1981). Whilst photographs, plans, and diagrams refer to different case studies, the scale relates them to one another (Eames, 1977).

The cultural and technological consequences of the modern and postmodern era determined a shift in terms of representational tools. They embraced symbolic and instrumental functions (Vesely, 2004). In fact, the adoption of computer graphic techniques has generated utopian scenarios embodying a lack of meaning. Consequently, the use of collages as a heterogeneous ensemble of textures, figures, volumes re-establish representation as a didactical and meaningful instrument as the Rowe's (1978) *Collage City*. This narrates the "poetic of the space," in which poetic is the meaning attached to the experienced build environment (Bachelard, 2014), as well as the collaborative outcome (Vesely, 2004) that characterises these unique case studies. The collage simultaneously represents the physical setting while envisions and inspires a possible future (Rowe, 1978).

Living Phase

This phase aims to document the totality of interactions between the case study, its inhabitants, and the community. The case studies, therefore, are interpreted through residents', professional caregivers' and volunteers' perception and experience of them. The analytical tools adopted in this phase are the behavioural mappings and qualitative interviews and semi-structured questionnaires (four older adults and four students/families), and caregivers (four professional caregivers). The behavioural mappings interpret residents' daily activities occurring in a specific period of 4 hours (See Appendix). Qualitative interviews and semi-structured questionnaires reveal how the case study influences on residents' wellbeing (care model) and perception of the architectural and urban physical settings. The following criteria informed the purposival sampling of the participants :

Older Residents

Inclusion criteria for interviews/semi-structured questionnaires were (a) male or female

aged over 65 years old; (b) a diagnosis of dementia (early stages of dementia therefore living well with dementia), or physical impairments. Exclusion criteria were a lack of full mental capacity according to the UK Mental Capacity Act 2005.

Young Residents

Inclusion criteria for interviews/semi-structured questionnaires were (a) a male or female aged over 18 years old; (b) an enrolled student at the local University or College.

Staff

Inclusion criteria for interviews/semi-structured questionnaires were (a) a male or female aged over 18 years old; (b) a professional caregiver/manager at the case study more than one year (See Appendix).

Martin Heidegger, Michael Foucault and Jacques Derrida wrote extensively about a modern and contemporary society, which has privileged the visual experience and its negative aspects over a holistic one. The recent advent of technological formats has supported this (Pallasmaa, 2009, Heidegger, 1962). Very often, buildings' physical forms and social patterns are considered separately because physical forms and social patterns belong to two different research domains. A work of architecture, for instance, may present a strong sense in terms of physical form while others have strong social patters without taking care about the form (McGlynn et al.,1985). Additionally, rarely the sensory legibility is investigated. It integrates the visual system and the basic orientation system with the auditory system, the haptic-somatic system, the taste and smell system (Gibson, 1966). This extends a place perception, central for people who might be characterized by different categories of impairments. Nevertheless, only together they are able to discover the full potential of a work of architecture; they are

complemental to one another (McGlynn et al.,1985). Consequently, this methodology not only provides formal considerations that are central to any work of architecture, but also contributes to a more rounded legibility of the case studies. It, in fact, is made of three levels: physical forms, activity patterns and sensorial perception. The notion of built environment, therefore, acquires a wider definition throughout this thesis. It not only refers to an inert box but it widens its geometrical, physical, thereby its Euclidian constitution, with a social and sensorial significance (Lefebvre, 1992). This untangles the interactions between a person's living or professional scenario, the different users' categories, and a case study physical setting.

The Method: The Thinking, Making And Living Development

The analysis is based on the conceptual framework proposed in the previous session. The Thinking, Making and Living methodology, therefore, empirically investigates the proposed case studies. The collected data through this methodology describes and when necessary compares the trilateral relationship between the care model, the case studies' occupants and the built environment. This methodology is the result of a development process underpinned by two equally determinant steps. The methodology was also tested with two national older adults care facilities: the Knotty Ash Sheltered Housing in Liverpool (UK), and Jewish Care Nursing Home in London (UK) (Landi, 2017). Consequently, in the section that follows, the two steps will be illustrated.

The first step in this process was the explorative literature review that established the state of the art in Post Occupancy Evalaution methodology. Besides relevant historical POE precedents such the RIBA Plan of Work for Design Team Operation (1963), the main criteria for selecting the literature were its publicaiton date and the object of the POE investigation. In fact, it considered POE of age and dementia-friendly environments which were published in the last fifteen years. Further literature

reviews concerned a wider spectrum of publications. They were organised in three main dimensions: the sociological, the design, and the medical/care dimension. The sociological dimension focused on the socio-economic challenges and policies that followed the new demographic structure. The postponed retirement age is a simple example that confirms a complexity of the contemporary due to a diversity in which older adults are ethnically, culturally and religiously heterogeneous. It covered also a more theoretical ground in which notions such as "open system and heterotopia" were investigated. The design dimension provided an insight into the architectural and urban design practices, and theories. For example, this framed the thinking, making and living phases as well as the historical notion architectural typologies. The medical/care dimension produced a more rounded understanding of the notion of dementia such as young onset of dementia (Hayo, 2015). It also revealed an insight into the professional care provision practice and theories (See Literature Review). This identified the particular research niche that this study is intentioned to address and synthesised in the principal research question.

The second step in this process was the characterisation of the adopted research methodology: the thinking, the making and the living. The idea of an architecture centred on people requires a tailored research methodology that is structured around people and takes into consideration their experiences. Older adults with early stages of dementia are one of the groups that actively participated in this study as well as potential beneficiary of its outcome. Their presence and necessity of interaction with them opened up the thinking, the making and the living methodology to some of the living-lab principles. Historically, the idea of involving users in the built environment evaluation was introduced by Le Corbusier with his second book about Le Modulor. (1958). In the book, the architect wrote: "Let the users speak next" (Le Corbusier, 1958, p.12). In fact, his publication attempted to collect and meditate on people experiences and perception of his architecture. Prof William Mitchell, MediaLab and MIT School

of Architecture and City Planning, introduced the living-lab notion into academia (Feurstein and Jens Schumacher, 2007). Conventionally, it is based upon a broad co-operation with citizens (in their roles as service users, consumers, workers, etc.). To maximise its creative potential, the living-lab approach requires a large and efficient engagement with large cohorts of the population. On the one hand, this increases the challenges. On the other, it exponentially increases the possibilities of a successful outcome (Hribemik et al., 2006). Nowadays, the living-labs' landscape includes a wide spectrum of techniques and approaches. The adopted principles are part of the participatory design territory according to Sander and Stappers' definition (2008), in particular, the user co-creation (UC) (Scapin et al., 2010).

After its definition, the thinking, the making and the living methodology was refined through a "triple helix approach" (Woods et al., 2013). It crystallised a partnership between institutions such as the Liverpool School of Art and Design, the Dementia Action Alliance and the Service Users Reference Forum (SURF), professionals and people/users working in order to co-tailor the chosen research methodology (Woods et al., 2013). Different figures such as architects, and SURF members were actively involved as source for its completion. They contributed to this process through traditional living-lab methodologies (Feurstein, and Schumacher, 2007) such as collecting their suggestions, answering to interviews and story telling. This widened the understanding of dementia and ageing by listening to people's stories and answers to questions such as "What does experiencing dementia mean?" (Interview Landi, 2016). The outcomes were tailored questions for semi-structured questionnaires and interviews, which would be used in analysis of case studies. These outcomes were a consequence of an approach that drew on the tripartite partners' expertise, skills and knowledge to work collaboratively and to enhance each other's performance through the process of communication as well as listening. The co-development helped to create an innovative point of view, which resulted in a unique insight of the analysis (Ham et al., 2012).

Prior to commencing the field study, ethical clearance was sought from the University Research Ethics Committee (University REC). This identified organisational and confidentiality challenges such as the selection of the participants in accordance with guidance of an appropriate authority, or the participants' possibility of withdraw at any moment from the project that were resolved as follows (Section 32 of the Mental Capacity Act, 2005). The PhD student contacted a Case study's Head Office at least one week before the potential on site survey. This allowed the PhD student to introduce himself, to ask for the availability of a gatekeeper and to arrange a visit's date and time. The email or phone call will included a simple, brief description of the study, academic references and the student's CV, information and contacts. On the day of the case study visit, the PhD student had first a preliminary informal meeting with a gatekeeper (a local caregiver or mental health practitioner). Together, they read and understood the participation information sheets. Whether the gatekeeper voluntarily decided to be part of the study, the PhD student asked for verbal or written consent (Sections 31 of the Mental Capacity Act, 2005).

The case study's visit is subsequent to this preliminary meeting. During the visit, the PhD student and the gatekeeper, as best practice, identified the participants to the study (semi-structured questionnaires and interviews). In particular, the gatekeeper, aware of residents' mental capacity, supported the PhD student in their selection (Sections 30 – 34 of the Mental Capacity Act, 2005). In an attempt to make each participant feel as comfortable as possible, at the end of a case study visit, the PhD student had an introductory meeting with the participants and gatekeepers. Together, they read and understood the participation information sheets. Additionally, it provided the signposting to local support services in case of necessity. Whether the participants voluntarily decided to be part of the study, the PhD student asked for verbal or written consent.

As best practice, the interviews and completed semi-structured questionnaires (Flick, 2011) were recorded and collected by the PhD student. Even if these documents were anonymised, participants preserved the possibility and the right of withdrawing from the study at any moment (Section 33 of the Mental Capacity Act (2005) capacity act - 2005). Consequently, each of the participants had a personal identification code that allowed the PhD student to protect participants' identity as well as their right of withdrawal. The collected data, and participant names-personal identification codes list were stored in a password protected workstation and a locked cupboard in the PhD student's office then safely destroyed with the completion of the study.

Furthermore, verbal consent was asked to residents and professional caregivers in case of their inclusion in photographs. The international nature of this study inevitably required the analysis of publications and primary data not necessarily in English. Consequently, Liverpool John Moores University and other institutions' staff, such as the University of Tokyo as well as professional translators, provided respectively in kind and paid translation services (See Appendix).

Further Definitions

Central in this study is to clarify some other theoretical notions that informed the investigation. First, the participants in this study are identified as inhabitants of the case studies. The participants are not considered as service users. This reveals a peculiar relationship between participants and case studies. They are not guests although they are inhabitants, and members of the community in which the case studies are placed. Furthermore, the international nature of the study may attribute different meaning to the same theoretical notions. A remarkable example is the notion of community which frequently recours in this thesis. For example, the Japanese definition of community, MURA, combines the physical act of compactly grouping housing and

local institutions with socio-economic and political patterns contained (Bestor, 1985). Additionally, communities may group people according to their interest such as religious communities, arts communities, sorting communities, or identities such as common cultural background (Fleming et al., 2016). While a variety of definitions of the term community have been suggested, this thesis uses the definition as compact geographical areas with different urban dimensions (i.e. a municipality, a village, and a neighbourhood). These areas may bind people beyond socio-economic, cultural, personal and political interests.

Throughout this thesis, the terms 'diverse' and 'diversity' are widely used. They are often associated with the terms 'city' and 'work of architecture.' They refer to the definition first suggested by Jacobs (1961) who saw it as terms to contrast the hazard of monotony in the built environment. A diverse city or a work of architecture that embodies diversity, for instance, is what this study attempts to theoretically formalise. They are composed of different groups of inhabitants who genuinely interdependently collaborates, and thereby the built environment is able to provide something for everybody: honest cities and works of architecture that reflect people's activities, and unique human settings.

Nevertheless, this contrasts with the more common segregation patterns following the new demographic structure which is a deep generational rift. This gap between two different generations is prevalently determined by different needs, desires, knowledge and "rhythms" (Lefebvre, 2004). The contemporary economic models supported these patterns by providing, for example, a market segmentation for lifestyle products (Simpson, 2015). On the one side, older adults are struggling in defining a clear dividing line between normal ageing and pathological ageing. On the other side, younger people embed completely different relational dynamics from previous generations (Alexander et al., 1977). These difficulties led to stigmatisation of older adults as a

social and economic burden and thereby strengthened avoidance patterns between different social and age groups. Nowadays, relational funding principles (Sennett, 2018; Sennett, 2012; Sennett, 2003, Sennett, 2004) are affected by a paradigmatic shift, and a generational compartmentalisation seems to be inevitable. Inevitably, this creates losses, instead of generating possibilities from diversities. It can be obtained only by a physical integration between young people and older adults. This phenomenon was already criticised by Lewis Mumford in 1956 (p.192):

The worst possible attitude toward old age is to regard the segregated group who are to be removed, at a fixed point in their life course, form the presence of their families, their neighbourhoods, from their normal interest and responsibilities, to live in desolate idleness, relived only by the presence of others in a similar plight.

Later in 1977, the American anthropologist, Margaret Mead, strongly critiqued the retirement communities, "retirement utopias" (Simpson, 2015) in her writings (p.48):

Older people used to stay in the family. Homes were big and there was room for extra aunts and grandparents. Families lived closed together in communities. Today we have more old people then the past. And we have changed our whole life style. The inflight to the suburbs the last 25 years has done a great deal of harm. In these age segregated, class segregated communities, there is no place for old people to live near the young people they care about. So the poor ones are stacked away in nursing homes, which are sometimes called warehouse for the old. The more affluent ones move into golden ghettos or go to Florida, but they too are segregated and lonely.

The result of this phenomenon produced isolated clusters in which older adults gather together. Their own past becomes unrecognized and may provide a status of "alienation, futility and misery" (Alexander et al., 1977). In fact, the older adults,

and in particular the Young – Olds represent great socio-economic resource which is actually more relevant than the younger generations (Simpson, 2015, Neugarten, 1974). Therefore, the diverse city or the work of architecture that embodies diversity are expressions of an inclusiveness that avoids the creation of big partitioned groups and migration movements which have isolated and damaged young and old alike. This preserves the sense of communality underpinned by an exchange, and a transgenerational contact (Alexander et al., 1977).

The 20th century run towards performance and efficiency, and economic model determined the spatial and functional differentiation of cites and buildings (Burdett and Sudjic 2008). It produced also the commercialization and corporatization of the now massive retirement and older adults care industry. This has occupied a specific traditional market portion where public and family health care provision were main figures. However, there is a failure of 20th century economic model while people are living longer in which dementia rates are increasing significantly. It demands for high dependency related services, while at the same time costs are spiralling possibly out of control of societal budgets, there is a need for a care modelshift. The following part of the thesis, therefore, proceeds with the first part of the background. It meticulously lays out the core themes which are peculiar to an Ageing society in contemporary culture.

REFERENCE LIST

Alexander, C., Ishikawa, S., and Murray S. (1977) *A Pattern Language: Towns, Buildings, Construction.* Oxford: Oxford University Press.

Anderzhon, J. W., Hughes, D., Judd,S., Kiyota, E., Wijnties, M. (2007) *Design for Aging Post-Occupancy Evaluations.* New Jersey (NJ): John Wiley and Sons.

Bachelard, G. (2014) *The Poetic of the Space.* New York (NY): Penguin Books.

Bestor, T. C. (1985) Tradition and Japanese Social Organization: Institutional Development in Tokyo Neighbourhood. *Ethnology* [online], 24, pp. 121-135. DOI: http://www.jstor.org/stable/3773554 [Accessed: 17th Novemeber 2016].

Braun, V. and Clarke, V. (2008) Using Thematic Analysis in Psychology. *Qualitative Research in Psychology* [online], 3(2), pp. 77 – 101. DOI: http://dx.doi.org/10.1191/1478088706qp063oa. [Accessed: 11 December 2016].

Burdett, R., and Sudjic, D. (2008) *The Endless City.* London: Phaidon.

Cullen, G. (1971) *The Concise Townscape.* New York (NY): Architectural Press.

Cutler, L. J., and Rosalie, K. A. (2009) Post-Occupancy Evaluation of a Transformed Nursing Home: The First Four Green House® Settings. *Journal of Housing for the Elderly* [on-line] 23, pp. 304-334. DOI: 10.1080/02763890903327010. [Accessed: 27th October 2016].

Daly, J., Mahmoudi Farahani, L., Hollingsbee, T. and Ocampo, R. (2016) Measuring

Human Experiences of Public Spaces: A Methodology in the Making. *Conscious Cities Journal* [on-line], 1. Available at: http://www.ccities.org/measuring-human-experiences-of-public-spaces-a-methodology-in-the-making/. [Accessed: 27 November 2016].

Eames C., and Eames, R. (1977) *Powers of Ten* [online video]. Available at: https://www.youtube.com/watch?v=0fKBhvDjuy0 [Accessed: 11th February 2020].

Feurstein, K., and Schumacher, J. (2007) Living Labs - the User as Co-creator. *Proceeding of the IEEE International Technology Management Conference (ICE).* [on-line] Sophia-Antipolis. 4-6 June. pp. 1-6. Available at: IEEE Xplore [Accessed: 2nd November 2016].

Fleming, P., Saïller, P., Marino, L., Klapper, B., Staëhle.B., Rauws, G., Sakali, S., Villez, M., McGuire, M., John Kennedy, J., Hare, P., Buchanan, A., and Morrison, E. (eds.) (2016) *Mapping Dementia-friendly Communities Across Europe.* Brussels: the European Foundation's Initiative on Dementia (EIFD).

Flick, U. (2011) *Introducing Research Methodology.* London: Sage.

Gibson, J.J. (1966). *The Senses Considered as Perceptual Systems.* Boston (MA): Houghton Mifflin.

Guarte, J. M. and Barrios, E. B. (2006) Estimation under Purposive Sampling. *Communications in Statistics - Simulation and Computation* [on-line] 35 (2), pp. 277-284. DOI: 10.1080/03610910600591610 [Accessed: 13th May 2019].

Gupta, R., Walker, G., Lewis, A., Barnfield, L., Gregg, M. and Neven, L. (eds.) (2016) *Care Provision Fit for a Future Climate.* Joseph Rowntree Foundation (JRF): York.

Ham, C., Dixon, A., and Brooke, B. (2012) *Transforming and Delivering Health of Social Care.* London: The King's Fund.

Hayo, H. (2015) Diagnosis and Support for Younger People with Dementia. *Art & Science Dementia Series* [on-line] 6, pp. 36-40. DOI: pdfplus/10.7748/ns.29.47.36. e9197 [Accessed: 6th November 2016].

Heidegger, M. (1962) *Being and Time.* Oxford: Blackwell Publishing Ltd.

Jacobs, J. (1961) *The Death and the Life of the Great American Cities.* New York (NY): Random House.

Landi, D. (2017) Towards New Architectural and Urban Typologies: Thinking, Making and Living as a Post Occupancy Evaluation Method. *Conscious Cities Journal* [online] 3. Available at: http://www.ccities.org/towards-new-architectural-urban-typologies-thinking-making-living-post-occupancy-evaluation-method/. [Accessed: 27th January 2018].

Laslett, P. (1989) *A Fresh Map of Life: The Emergence of the Third Age.* London: Weidenfeld and Nicolso.

Le Corbusier. (1958) *Modulor 2.* London: Faber and Faber ltd.

Lefebvre, H. (1992) *The Production of Space.* New Jersey (NJ): Wiley.

Lefebvre, H. (2004) *Rhythmanalysis: Space, Time and Everyday Life.* London: Continuum.

Lewis, A. (2015) Designed for an Imagined User: Provision for Thermal Comfort in Energy – Efficient Extra – Care Housing. *Energy Policy* [on-line], 84 pp. 204-212. DOI: http://dx.doi.org/10.1016/j.enpol.2015.04.003 [Accessed: 11 December 2016].

Lynch, K. (1960) *The Image of the City.* Cambridge (MA): MIT press.

Mental Capacity Act, 2005 [online] Available at: https://www.legislation.gov.uk/ukpga/2005/9/contents [Accessed: 10th December 2016].

McGlynn, S., Smith, G., Alcock, A., Murrain, P., Bentley, I. (1985) *Responsive Environments, A Manual for Design.* Oxford: Elsevier Ltd.

Mead, M., and Hechinger, G. (1977) Growing Old in America. *Family Cycle,* 90 (8) pp. 27-32.

Mulder, I., and Stappers, P.J. (2009) Co-creating in Practice: Results and Challenges. *Proceeding of the IEEE International Technology Management Conference (ICE).* [on-line] Leiden. pp. 1-8. 22-24 June. Available at: IEEE Xplore [Accessed: 2nd November 2016].

Mumford,L. (1956) *For Older People: Not Segregation but Integration.* London: F.W. Dodge Corporation.

Neugarten, L. B. (1974) Age Groups in American Society and the Rise of the Young-Old. *The ANNALS of the American Academy of Political and Social Science* [online] 415, pp. 187-198. DOI: 10.1177/000271627441500114 [Accessed: 12th October 2016].

Niitam, V., Kulkki, S., Eriksson, M., and Hribemik, K. A. (2006) State-of-the-Art and Good Practice in the Field of Living Labs. *Proceeding of the IEEE International Technology Management Conference (ICE).* [online] Milan. 26-28 June. pp. 1-8. Available at: IEEE Xplore [Accessed: 2nd November 2016].

Noreika, J., Kujot, J., and Turgrude, S. (2002) Bathroom Design in a Dementia – Specific Assisted Living Facility. *Alzheimer's Care Quarterly* [online] 3, pp. 32-37. Available through Research Gate. [Accessed: 11th November 2016].

Pallasmaa, J. (2009) T*he Eyes of the Skin. Architecture and the Senses.* Chichester: Wiley.

Pallot, M., Trousse, B., Senach, B., and Scapin. D. (2010) Living Lab Research Landscape: From User Centred Design and User Experience towards User Co-creation. *Proceeding of the First European Summer School "Living Labs".* [on-line] Paris, France. 10 August. Available at: Inria [Accessed: 2nd November 2016].

Preiser, W. F.E. (2001) Feedback, Feedforward and Control: Post-Occupancy Evaluation to the Rescue. *Building Research & Information*, [on-line] 29 (6), pp. 456-459, DOI: 10.1080/09613210110072692 [Accessed: 11th November 2016].

Preiser W.F.E., and Vischer, J.C. (eds.) (2005) *Assessing Building Performance.* Oxford: Elsevier Butterworth-Heinemann.

Royal Institute of the British Architects (RIBA) (1963) *Plan of Work for Design Team Operation.* London: RIBA.

Rowe, C., and Koetter, F. (1978) *Collage City.* Cambridge (MA): MIT Press.

Sanders, E. B. N., and Stappers P. J. (2008) Co-creation and the New Landscapes of Design. *CoDesign* [online] 4, pp. 5-18. DOI: 10.1080/15710880701875068. [Accessed: 6th November 2016].

Sennett, R. (2003) *Respect. The Formation of Character in an Age of Inequalities*. London: Penguin Books.

Sennett, R. (2004) *The Fall of Pubic Man.* New York (NY): Penguin Books.

Sennett, R. (2012) *Together. The Rituals, Pleasure and Politics of Cooperation.* London: Penguin Books.

Sennett, R. (2018) *Building and Dwelling. Ethics of the City*. London: Penguin Books.

Service Users Reference Forum (SURF) member (2016) *Interview* with Davide Landi. Liverpool, 15th December 2016.

Silverman, M., Ricci, E., Saxton, J., Ledewitz, S., McAllister, C., and Keane, C. (1996) *Woodside Place: the First Three Years of a Residential Alzheimer's Facility, Vol.1 and 2*. Oakmont: Presbyterian Senior Care.

Simpson, D. (2015) *Young - Old: Urban Utopia for an Ageing Society.* Zurich: Lars Muller Publishers.

Smith, R., Mathews, M. R., and Meredith G. (2010) Pre- and Post-occupancy Evaluation of New Dementia Care Cottages. *American Journal of Alzheimer's Disease & Other Dementias* [on-line], 25 pp. 265-275. DOI: 10.1177/1533317509357735 [Accessed:

6th November 2016].

Tshumi, B. (1981) *The Manhattan Transcripts: Theoretical Projects.* London: Architectural Design.

Turpin-Brooks, S. and Viccaris, G. (2006) The Development of Robust Methods of Post Occupancy Evaluation. *Facilities* [on-line] 24(5) pp. 177-196. DOI: http://dx.doi. org/10.1108/02632770610665775. [Accessed: 11 Novemebr 2016].

Vesely, D. (2004) *Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production.* Cambridge (MA): MIT Press.

Woods, L., Pedleton, J., Smith, G., Parker, D. (2013) *Innovative Dementia Baseline Report: Shaping the Future for People with Dementia.* Liverpool: Liverpool John Moores University.

Zimring, C. M., and Reizenstein J. E. (1980) Post-Occupancy Evaluation: "An Overview." *Environment and Behaviour* [on-line] 4, pp. 429-451. DOI: 10.1177/0013916580124002 [Accessed: 27 October 2016].

CHAPTER 1

Social Metabolism

What can be learned from the general literature framing the aged in contemporary culture? This is a wide-ranging literature, often focusing on the older adults as a group of frail, inactive, and dependent subjects (Levy 2017; European Union 2016; Burke et al. 2015). Six themes can be ascertained from this that support my study. They are: (a) *The Prevalence of an Ageing Society*; (b) *A Dynamic Concept of Dementia*; (c) *A Resilient Age Category*; (d) *A Paradigmatic Shift inside the Family Structure*; (e) *The Role of Policy Makers*; and (f) *Ageing in Place: in Homes, in Villages, in Towns and in Cities*. In what follows, the chapter picks out the main points generated by the literature, which concern the six themes. The overall structure of the chapter takes the reader to second part of the robust background, which concerns with a critique to simplifying modernist and post-modernist urban and architectural strategies. The emerging background supports my further analysis and discussion surrounding the case studies and the notion of architectural types.

Section 1: The Prevalence of an Ageing Society

One aspect that characterises this century is its new demographic setting. Inevitably, it strongly impacts on metropolitan areas such as Rotterdam, Helsinki, Tokyo, London. Metropolitan areas, which represent the health of each nation (Toronto University, 2013). This is a direct consequence of local factors such as improved life-styles and health care system, and fall of birth rate, and infant mortality (European Union, 2015, a; Ortman et al., 2014; Burke et al., 2015; Dobriansky et al., 2007). In Europe, the number of people over 65 years old will be more than 20% of the total population by 2025. Additionally, the older adults over 80 years old will increase proportionally (Arup, 2015; Dobriansky et al., 2007). Therefore, all older age groups significantly expands (Ortman et al., 2014).   In 1962, for the first time in European history, the number of people over 65 years was higher than the number of people between 0-5 years old (Arup, 2015; WHO, 2012). Globally talking, for the first time in human

history the number of older people will be bigger than the number of children by 2050 (Dobriansky et al., 2007). They will constitute 22% of the global population (University of Toronto, 2013; Kochhar and Oates, 2014). Emerging countries such as China, India and relatively young countries as the USA will each have more than 100 million people over 65 years old as a consequence the "baby boomers generation" (Ortman et al., 2014; Arup, 2015). Africa is expected to experience the highest population increase. Therefore, some countries will grow old before become rich (Dobriansky et al., 2007). In this global phenomenon, the differences in life expectancy among countries will be reduced (OECD, 2015, b). For example, countries known for the highest rates of life expectancy such as Japan, Italy and Germany will be overtaken by other countries such as Mexico, Korea and Turkey between 2050 – 2100 (OECD, 2015, b) – Figure 1.

In particular, the UK population over 65 years old is projected to increase from 16% to the 24% of the population between the 2008 and 2051 (Lloyd et al., 2014). More dramatic has been the increase of people over 85 years old. In fact, it has raised from 0.9 to 2.3% from the 1971 to the 2010.This ratio is expected to double by 2036 (Lawton and Silim, 2012; Lloyd et al., 2014). Metropolitan areas such as London are subject to this shift also. In the next 30 years, the cohort of people over 85 years living in London will be 350,000 while the number of people over 65 years reached 1,000,000 in 2016 (Cliftoned, 2011). As described before, this is in line with prevalence of an ageing population of other European countries. For example, the over 65 population in the Netherlands is 16%, slightly lower than the average European percentage. By 2050, the rate is expected to pass 26% (Smits et al., 2014) – Figure 2. Finland presents a similar phenomenon. The Finnish life expectancy has increased in the last 50 years. It was of 69.8 in the 1970s while in 2013 was estimated 82.8 for males and 86.4 for females. This is expected to rise at 87.4 for males, and 90.7 years old for female by 2060 (European Union, 2015, a; European Union, 2015, b). Therefore, the people over 65 years old constitute the 21.1% of the total Finnish population and it is expected
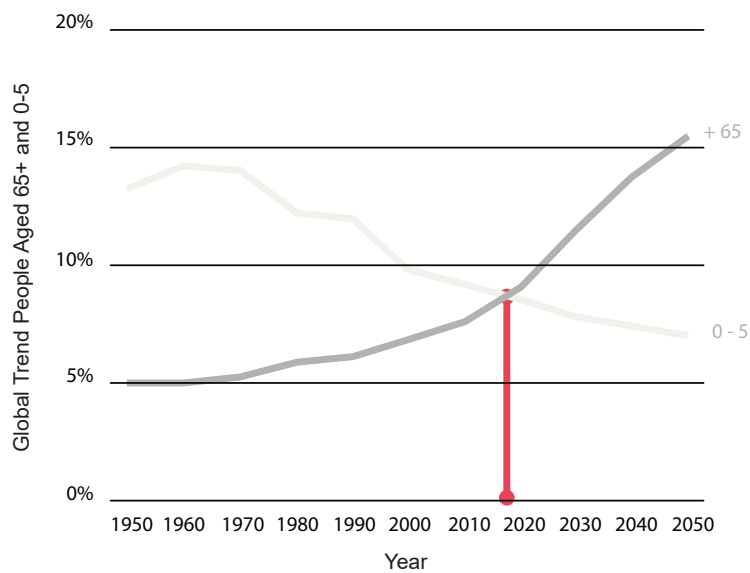
*Figure 1. Global Ageing Trend.
Data Source Arup © Davide Landi*

to surpass the 26% by 2050 (OECD, 2015, b; DESA, 2015) – Figure 3. Taking into consideration the Japanese demographic composition confirms the ageing global tendency. In 2012, the population over 65 years was constituted 21% of the whole population, and by 2050 the same age category may become the 40% (Henke et al., 2009; WHO, 2012; OECD, 2016; Nakanishi and Nakashima, 2014; Anonymous, 1993; Hayashi, 2013; Hayashi, 2014). This means that the whole dependent population (older adults and children) will represent the 66.5% of the Japanese population in 2050 (Ohno, 2017) – Figure 4.

Besides older healthy people, the number of older adults with a reduction of their mental and physical capacity is increasing. The spread of these long-term conditions, rather than 'incommunicable diseases' will represent an economic burden (Dobriansky et al., 2007), estimated at £469 billion in 2010 (WHO, 2012). Consequently, the number of older adults living with dementia will relevantly increase as well. In particular, the global number of people living with dementia was counted 35.6 million people in 2011. It is projected to nearly double in 20 years, and thereby to reach 65.7 million by 2030 (WHO, 2012). Additionally, a 2012 World Health Organisation report studies showed that there are 7.7 million new cases of dementia each year, a new case every 4 seconds (WHO, 2012). Western Europe region presents the highest number of people with dementia - approximately 7 million. East Asia and South Asia Regions follow it with respectively 5.5 million and 4.5 million people. North America counts 4.4 million people with Dementia (WHO, 2012). Even if a wider awareness and knowledge surrounding the dementia discourse has contributed to reduce the risks associated with the manifestation of dementia (Langa, 2015), statistics illustrated an increase in number of people with "young onset of dementia." These are younger people – under 65 years old – who have dementia and thereby still of working age – Figure 5. For example, the UK cases of "working age dementia" has reached the number of 42,000 (Hayo, 2015), in Finland is between 5,000-7,000 people (Ministry of Social Affairs and Health, 2013). However,
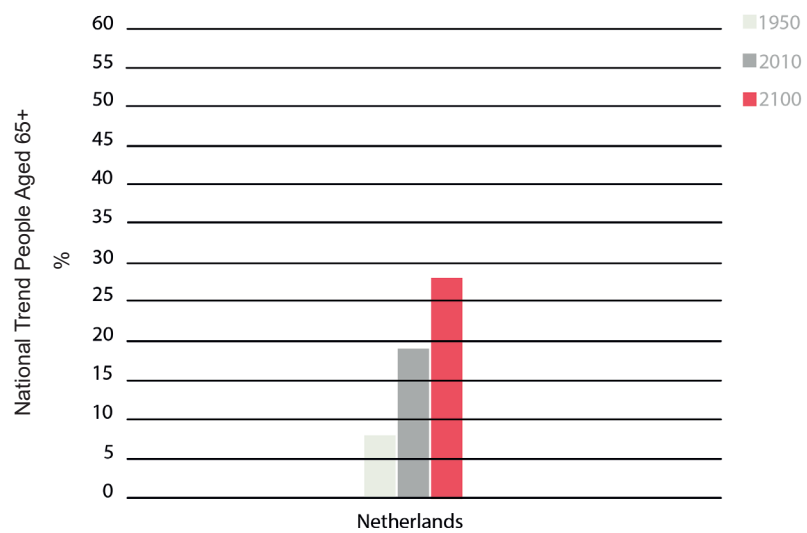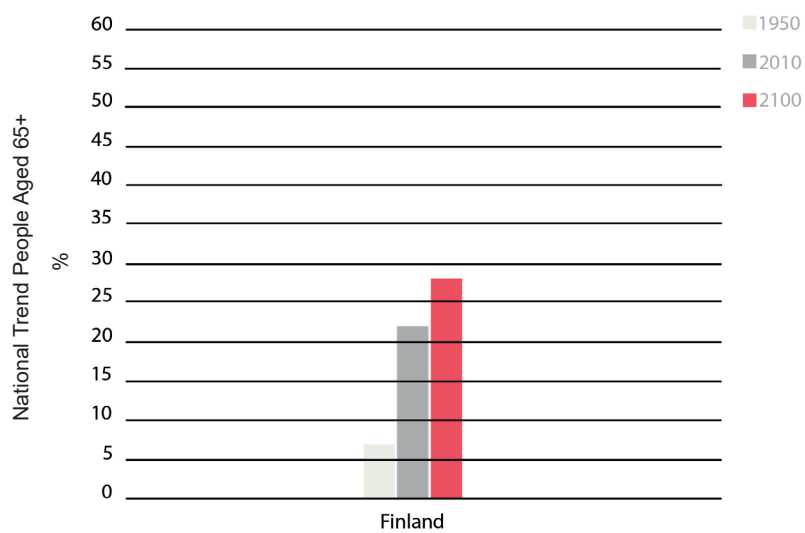
Figure 2. The Netherlands Ageing Trend. Data Source OECD © Davide Landi

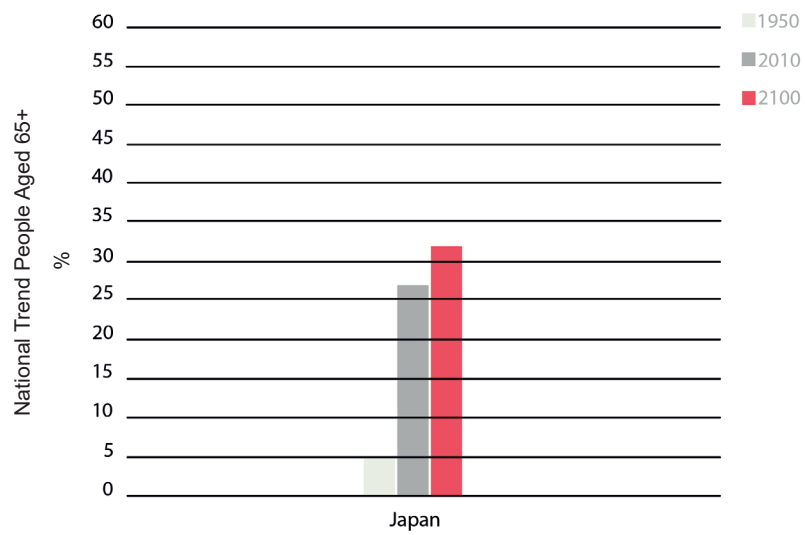*Figure 3. Finland Ageing Trend. Data Source OECD © Davide Landi*

Figure 4. Japan Ageing Trend. Data Source OECD © Davide Landi

the total number of people living with dementia in UK is around 700,000. This number is expected to double to 1.4 million in the next 30 years (Cliftoned, 2011). Finland counts 13,000 people every year diagnosed with dementia and memory disorders, an average of 36 every day (Ministry of Social Affairs and Health, 2013; Sulkava, 1985) – Figure 6. A longitudinal study by Hofman et al. (1991) showed that the prevalence of dementia among females and males were respectively 8.7% and 7.5% for people between 65 - 84 years old, and it increased respectively to 11.2% and 9.8% for people over 85 years old. A 2010 investigation (Ministry of Social Affairs and Health, 2013) revealed that the number of people diagnosed with memory disorder has grown to over 95,000 people with at least a moderate dementia; and approximately 30,000–35,000 people with a mild memory disorder. Consequently, the estimated total number of Finnish suffering from at least a moderate dementia by 2020 is 130,000 (Ministry of Social Affairs and Health, 2013). The numbers are different in the case of the Netherlands. In particular, dementia was diagnosed to 245,560 people in 2012 (1.47% of the Dutch population) (Alzheimer Europe 2013), a rising number in line with European tendencies – Figure 7. Japan instead had a population of 1.49 million people with dementia in 2002. The number raised to 4.6 million in 2016 (Hayashi, 2013, Sieg, and Ha, 2016; Arai et al. 2010), it is projected to reach 7 million by 2025 (Sieg, and Ha, 2016; Nakanishi and Nakashima, 2014) – Figure 8.

The new demographic structure together with a rising number of older adults with dementia have a cost. It is not only concerned with the economic sphere although it is deeply rooted into the sociocultural domain (i.e. stigmatization of an age group as a social and economic burden) (Burke et al., 2015). Additionally, this concern varies from country to country. For example, the majority of US population believes that the new demographic structure does not constitute a problem, while the 87% Japanese population believes that it is. Inequalities are shown also between different age groups. For instance, older adults are worried while adults between 18-29 years-old are not
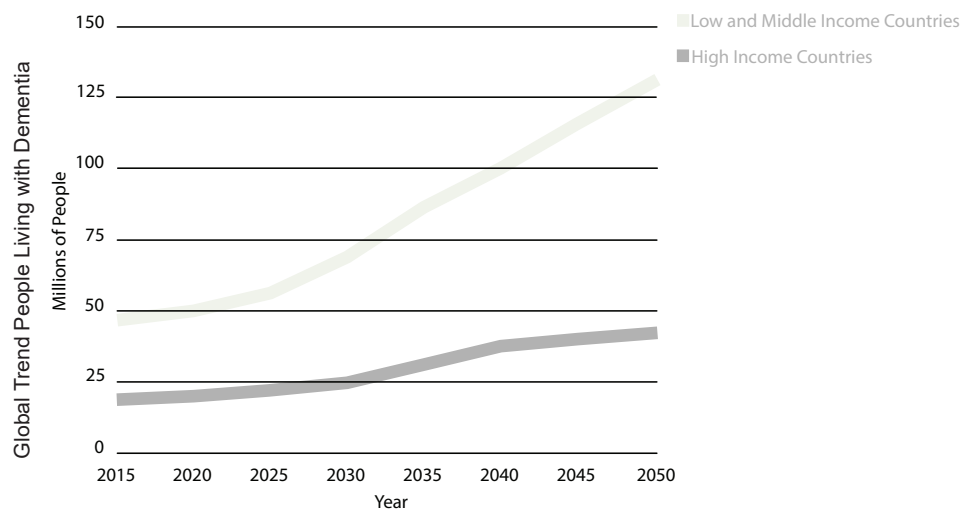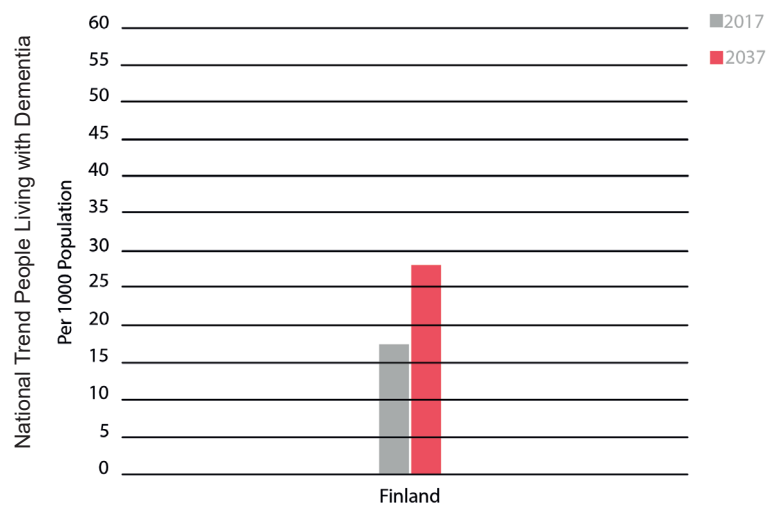
Figure 5. Global Dementia Trend. Data Source World Health Organisation (WHO)© Davide Landi

Figure 6. Finland Dementia Trend.
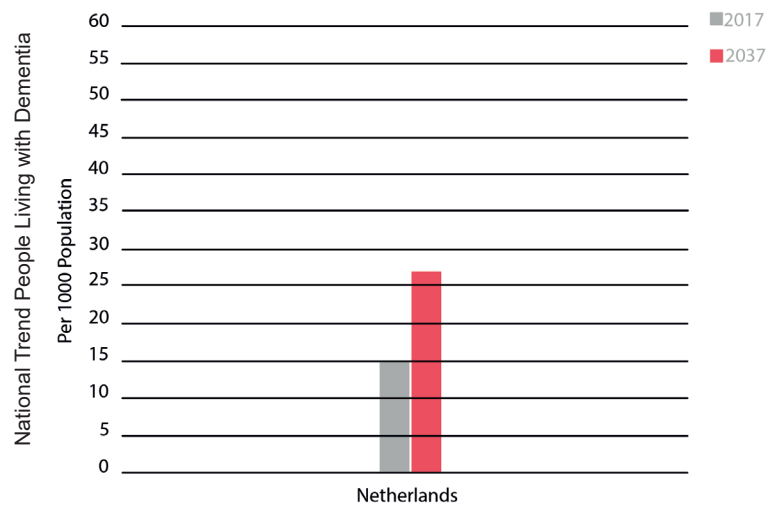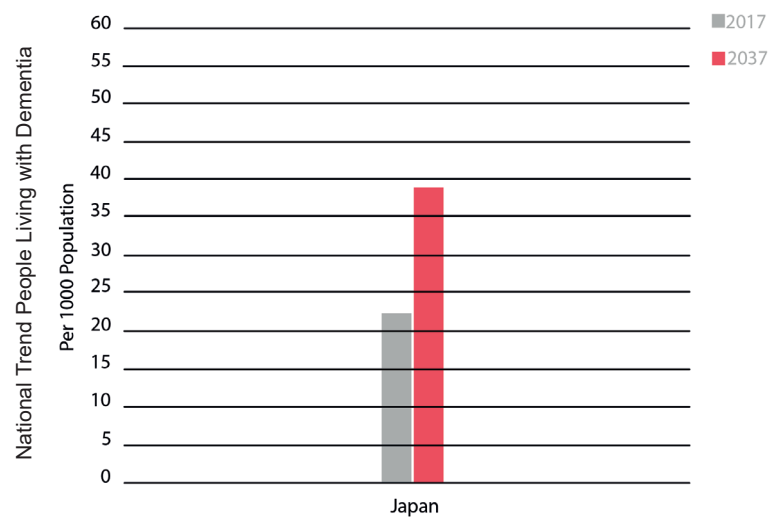*Data Source OECD © Davide Landi*

Figure 7. The Netherlands Dementia Trend. Data Source OECD © Davide Landi

Figure 8. Japan Dementia Trend. Data Source OECD © Davide Landi

(Kochhar and Oates, 2014). Furthermore, differences among countries are shown also in terms of who should carry this economic and sociocultural cost. On the one hand, one third of the US, Germany and United Kingdom citizens attribute this burden to be carried by the older adults themselves. On the other, the 30% - 40% Japanese and French citizens link this burden to families. Surprisingly, citizens of other countries such as Italy and Spain point to the national governments in charge of it (Kochhar and Oates, 2014). Nevertheless, this cost affects institutions as well as older adults themselves, professional and informal caregivers (Burke et al., 2015). Inevitably, this influences the societal expectations for the last part of people's lives that may lead to certain kinds of discrimination (Hashimoto, 1996). An example is the difference between how Japanese and European older adults perceive the ageing process. The Japanese see the advancement of years as an opportunity while European see it as a nostalgia of the past (Hashimoto, 1996). These expectations affect many of the aspects which are connected to the new demographic structure such as policies, and design guidelines and thereby the satisfaction of certain needs such as independence, privacy (Wister and Burch, 1989) which emphasises avoidance patterns. In this, we should pay special attention to dementia, including its notion and its historical and cultural variations.

A Dynamic Concept of Dementia, and Senile Pathologies: a Brief History.

Historically, dementia has been constantly present in western and eastern cultures. During the centuries, the advent of certain epidemics such as the plague had cyclically and temporarily shifted public opinion's focus from a disability that mainly affected people in the later stage of their lives. Nevertheless, in the last few decades, dementia has been put again at the centre of the political and health care provision discourse. The new demographic structure with the rising number of people with young onset of dementia have had posing new socio-economic and health care challenges.

The fact that many popular figures such as Nietzsche, Rudolph Churchill and Ronald Regan were diagnosed with dementia with physical and mental implications (Boller and Forbes, 1998), has allowed historians, and experts in medical history to track through the centuries dementia and perceptions of it, its stigma, and sedimentation, and its imprint in the public society.

Throughout the 20th century, dementia had been considered as a one dimensional subject. In particular, experts in dementia split its study and understanding according to its causes. However, social and economic achievements, and improved health and living conditions determined the disappearance of some of the traditional causes. Nowadays, disabilities of old age are interpreted in a totally different manner. They no longer represent an avoidable part of older adults' lives (Boller and Forbes, 1998) while the stigma surrounding old age and, in particular, mental illness has been partially reduced.

Des Maladies Mentales was the most influential manual about dementia of the 19th century. There, a 'demented' man was described as a wealthy man turned poor. In this manual, Jean-Etienne Esquirol (1848), the author, defined a list of the causes of 'senile dementia' such as menstrual disorders, progression of age, syphilis, domestic problems, poverty, unfulfilled ambition, and fears. This list opens a window on how dementia was perceived at that time by doctors and experts. However, Philippe Pinel, father of the modern Psychiatry, between 1794 and 1799, provided the first definition of dementia in his *Treatise on Insanity*:

The dementia of which we are treating is generally accompanied by turbulent and ungovernable mobility, by a rapid and unconnected succession of ideas, which appear

to be generated by the mind, without exciting their correspondent expression upon the organ of sense and by passionate emotion which seems to be felt and to be forgotten without reference to external objects.

<div align="right">(Pinel, 1806, pp.161)</div>

This literature was the outcome of a court judgment regarding the case of a woman who acted as insane in order to avoid trial (Boller and Forbes, 1998).

In earlier centuries, between the 15th – 16th century, dementia was directly related to the onset of syphilis. The common belief identified the discovery of the Americas and Columbus' sailors as the cause of the rapid epidemic spread of syphilis in Europe. Additionally, the Medieval times were characterised by several catastrophic events such as large scale infection. Dementia, therefore, was placed on the back burner for a while. However, spiritualism and religious beliefs were the explanation for mental health related diseases and senility. In fact, they were considered as the consequence of original sin as argued by the philosopher Roger Bacon (Boller and Forbes, 1998).

Furthermore, cases of dementia and senile dementia were already mentioned in classical literature, Roman and Greek literature. On the one hand, there are stories related to popular characters which stand between the gossip and historical facts and describe the experience of senile dementia. For example, an old Agamemnon almost killed his daughter because she was willing to take part to the Trojan War. On the other, there are many manuscripts written by Greek and Roman philosophers covering the topic of dementia. Aretheus of Cappadocia, for instance, made a differentiation between reversible neurological and psychiatric disorders defined as "delirium," and chronic neurological and psychiatric disorders, which generated irreversible deteriorations of cognitive functions. Hippocrates, however, framed some of mental impairments as direct or indirect consequences of diseases placed in other parts of

a human body. Solon, father of modern legal thinking, instead, mentioned in one of his writings the relationship between mental capability and drugs, violence, gender and old age (Freeman, 1998). However, Egyptians showed in their representation an awareness about dementia a few centuries earlier (Boller and Forbes,1998).

A Schizophrenic Definition

The concepts of dementia, senile dementia and senility changed through time. The reduced technical barriers in identifying brain lesions (Holstein, 1997) and memory testing (Berrios, 1990), determined a superficial generalisation of these three terms as well as the symptoms related to them. Consequently, there was a lack of interest from different academic sectors such as general gerontology, social sciences and humanity of medicine in the subject. This was subverted in the 1980s with a statistical awareness of a different demographic structure and socioeconomic implications (Berrios, 1990).

Nowadays, literature provides a wide spectrum of analyses surrounding this subject, and sometimes they are contrasting. For example, Peng (2003) described dementia not as a pathology but a biological declining process in which behavioural alterations are consequence of several brain impairments. Lishman (1987, p.6) defined dementia as *"an acquired global impairment of intellect, memory and personality, but without impairment of consciousness…as such it is almost always of long duration, usually progressive, and often irreversible."* In the 19th century, dementia was considered as a reversible syndrome, instead of a terminal status (similar to several neurological and psychiatric disorders (Dagonet, 1876; Ball and Chambard, 1882; Kowalewski, 1886). This condition could include temporary hallucinations, delusions, volitional defect, motility disorders, behavioural failure and psychosocial incompetence (Clouston, 1888).

Berrios (1990), by critically reviewing many of these different interpretations of dementia frames it as a syndrome not necessarily age related. There is ambiguity, although, when senile dementia is taken into consideration. It was inherited from the 19th century dualism between reversible and non - reversible syndromes. Furthermore, the benign memory loss and deficit that constantly occurs with older age and senility were associated with dementia. This negatively affected the notion of older age which was very often perceived as an illness. Pathological and normal ageing were not differentiated (Charpentier, 1885). Consequently, Nascher, the American physician who conceived the term geriatrics, made a clear distinction between the two at the beginning of the 20th century (Lawrence and Leibing, 2006). His text, Geriatrics, clinically differentiated normal and pathological degeneration. Nevertheless, it was not sufficient to stop discussions and confusion surrounding senility. For example, Gray (1941) critically addressed this issue by stating the yet coexistence of two opposite schools of thought in the USA between the two world wars. In particular, "one school considered senility a pathological disorder, the other described it as a normal physiological state" (Achenbaum 1995, p.120). Consequently, this generated an unclear dividing line between pathological and normal ageing. A remarkable example was the 1940s publication of the *Diagnostic and Statistical Manual of Mental Disorder (DSM)* by the American Psychiatric Association. In the first edition, it presented a section dedicated to "mental disorders." In this section, dementia was classified as "Organic Brain Syndrome" (OBS) chronic or reversible. In the second edition, however, the DSM proposed a differentiation between senile and pre-senile dementia while still identified as OBS. Only in the third edition, dementia was redefined as "a loss of intellectual abilities of sufficient severity to interfere social or occupational functioning." (Boller and Forbes, 1998). Consequently, this medical category was not related to age.

Whether only few would agree on the idea that ageing is physiologically normal (Holstein, 1997), professionals and scholars started to have a different interest towards senility.

This was a consequence of abating the confusion and multiple meanings covered under the umbrella term dementia, and its diagnosis (Berrios, 1990). In fact, some of the behavioural symptoms, which could be present in pathological and normal ageing, were considered in the diagnostic process for the first time (Lawrence and Leibing, 2006; Berrios, 1990). Conditions such as Alzheimer's disease were clinically defined (Berrios, 1990). In detail, Alzheimer's disease officially appeared in the public and clinical scene in early 1970s (Holstein, 1997; Budson, and Kowall, 2014). This was the beginning of a more rounded comprehension of senility (Lawrence and Leibing, 2006). Nowadays, the work of Budson and Kowall, (2014, p. 5) provides a more contemporary definition of dementia: *"a syndrome of acquired persistent intellectual impairments characterized by a deterioration in at least three of the following domain: memory, language, visuospatial skills, personality or behaviour, and manipulation of acquired knowledge."*

Nevertheless, this frames a western notion of dementia. Atchley (1989, p. 184) wrote: *"There may be social expression of pathological ageing and thus pathological aging needs to be interpreted within the framework of norms and values that characterized a given cultural milieu, but the basis of defining pathological ageing remains fundamentally biological."* Relevant to this study and its international nature, therefore, is to consider the ethnographic influence on it, in particular the Japanese context. In Japan, the concept of senility matches with the European one. This was confirmed in 2004, when the Japanese word for dementia "CHIHO" which carried a negative meaning (Traphagan, 1998) was changed into "NINCHISHO" (cognitive disorder) with the target of raising awareness and understanding (Hayashi, 2015; Takeda et al, 2010; Alzheimer Disease International, 2015, a). However, differences are unveiled in people's beliefs (Traphagan, 2006). Japanese older adults are more worried about the folklore beliefs surrounding old age and its related impairments than the scientific definition and its medical conditions. In fact, Japanese link to this word three different

categories of functional decline usually connected to older adulthood. This classification is mainly referring to the different possibilities in facing the functional decline. These three different categories are:

_Alzheimer's disease;

_All the other forms of dementia occurring in older age;

_'BOKE.' It is a word with multiple meanings that can be literally translated as "being out of it."

The first two categories are identified as clinical senility (Traphagan, 1998). The diagnosis of them is at the expense of older adults, in fact, a common expression is used "SHIKATA GA NAI" meaning that nothing can be done. This expression refers to a condition which goes beyond the human control. "BOKE", instead, is more identified as a social category of physical and mental impairments over which older adults might have some factors of control (Traphagan, 2006).

The BOKE concept was introduced by a 1970s popular Japanese novel KOKUTSU by Aryoshi that documented the difficulties of a woman in taking care of her older father in law (Traphagan, 2006; Traphagan, 1998). This classification clearly defines the boundaries of what is pathological or not. This has driven a series of publications on the theme of the BOKE. Most of them were books about how to prevent the BOKE by fostering good diet and physical exercise, and being engaged in the neighbourhood activities. Very often in these books, the other two categories such as Alzheimer's and another form of dementias (i.e. vascular dementia) were equalised to BOKE (Traphagan, 2006).

Additionally, these publications together with governmental propaganda have been emphasising the moral perspective and self-cultivation connected to older age. The engagement in the suggested activities would mean the fulfilment of social duties by a moral and responsible older adult. The manifestation of the BOKE represents a failure of an older adult - an older adult who has not been putting too many efforts in "being a good ROJIN." This has fostered a fear about of legitimised dependency on their own children and avoidance of being a burden on another person, or society (Traphagan, 1998). However, how does BOKE manifest itself? It can be described as an overlapping of the cognitive decline of the person (mainly memory loss), psychological burden of having not fulfilled the social responsibilities as "good ROJIN," and economically and socially overloading others such as relatives with the need for care provision (Traphagan, 2006; Traphagan, 1998; Hayashi, 2015).

Furthermore, the Japanese identify the concept of healthiness as a collective benefit. Besides the mental and physical wellbeing, this underlines the importance of a healthy environment. This is an environment as a notion that goes beyond the physical settings, in particular focusing on people's roles in making a healthy environment. Consequently, the government has been supporting a series of programmes in which older adults are motivated in pursuing their hobbies such as group singing, group calligraphy, group instruction for traditional musical instruments, and extended education. (Traphagan, 2006; Taga, 2016). These stimulate the brain and the memory by increasing blood circulation (Hori and Cusack, 2006) so reducing the risk of BOKE.

This reveals the roles of older adults in different societies and cultures (Lawrence and Leibing, 2006). On the one side, the Japanese older adults attempt to preserve as long as possible their engagement with the society as a whole in order to be active and "good older people." However, Japan is a country in which also everyday relationships are regulated and shaped by strong and rigid formalities and behaviours. For example,

the word "AMAE" identifies adults' dependence on the public and expectations for being cared by them as a right (Sennett, 2003). Therefore, the idea of preserving in later age people's social network is physically and mentally exhausting. Therefore, it can produce negative effects on older adults' well-being (Go-Un, 2017). On the other, the European older adults have occupied marginal social roles since the Second World War. European countries share a strong culture that revolves around the notion of labour. Consequently, preserving an active existence after retirement has been difficult. This, as argued by some psychiatrists, has contributed to a more rapid biological decay of older adults (Lawrence and Leibing, 2006).

Taken together, these arguments support a notion of senility, dementia and thereby senile dementia, which have gone through an evolving definition process and thereby fragmentation. This has been the result of technological achievements, and diagnostic technique. Inevitably, this affected directly and indirectly and indirect scholars' contribution on the topic that rooted a partially negative stigma in the public opinion. It was due to an inability in defining clear boundaries between normal and pathological ageing (Traphagan, 1998). This is deeply rooted stigma that the recent public campaign has hardly contained (Lawrence and Leibing, 2006). In particular, it has sought to "normalise" instead of "medicalise" dementia by generating a positive image surrounding dementia (WHO, 2012). The novel *Beyond the Line* written by Robert Gard is a remarkable example (1992, p. 21 -23). The author describes the attempts and the struggles as well as the importance in defining the edge between normal and pathological ageing:

I found myself beginning to watch the line in several older friends and even in myself. I began taking careful heed of where I put things; of noting, what my daily habits were if I ever varied from them unknowingly. Sometimes, I thought I could discern small lapses – at home, I would head for another room to get a certain object and entirely

forget what it was I went fetch. I learned that these small signs were almost universal in older people, however, and that the larger lapses, the confusion, the wandering away were more serious. Of these, I was not guilty, and I noted that in my public addresses, of which I gave a fair number, my train of thought was never broken or inextricably lost. I could talk for two hours without notes and never lose track of where I was. I was told that this was encouraging and that I was certainly not yet approaching the line. But the line became an antagonist. In my imagination, it grew almost a living thing, a reality, and I fancied I saw it often drawn for this person or that. When one considers the line becomes easy to think in negative terms, and to become fanciful about many aspects of life. Often I heard friends say: "The thing I dread most is becoming senile," and I wondered whether they too were aware of the line.

This is a "public health priority" and a right (WHO, 2012). There are no available treatments able to reduce or alter its progressive course. However, it is possible to reduce its socio-economic impact through early diagnosis, active life, well-being, and providing information and long-term, multi-layered support to professional and informal care givers. These objectives are part of the *British Dementia Strategy* (Department of Health, 2012) named as "Living Well with Dementia." While they may positively have an effect on some of the challenges (e.g. the disruption of a life-cycle, the loss of identity and isolation) which are posed to the selfhood of people who experience dementia and those who care for them, these objectives must be effectively implemented (Banerjee, 2010; Clemenson et al., 2014; Downs, 2013). With this caveat at hand, the thesis should now focus on the evolving nature of the ageing process, including its relation with the socio-economic context.

Section 2: A Resilient Age Category

The *Cambridge Dictionary* (2012) describes the adjective "elderly" as "older people

considered as a group." The adjective "older," therefore, acquires different meanings according to different subjects such as time, biology, psychology, sociology and anthropology, with which it is concerned. This recent mature awareness surrounding the older age requires a diversified term. For example, institutions and policy makers are redefining the "older-adults" category. This new term embeds the older adults' contemporary challenges, which day after day are occupying a more central role (OECD, 2015, b). Arup (2015, p.10), for instance, describes old age as: "Not an inherent vulnerability. It is the failure of policies, systems and society to respect and support the fulfilment of our rights in older age that constructs our vulnerability, through our exclusion from processes and decision making and inequitable access to resources and services." Throughout this thesis, the terms "older" will refer to the majority of quantitative and qualitative studies in which the term "older" and "older adult" classify and distinguish the older adults' age group from younger age groups (OECD, 2015, b). In particular, the older adults' age group includes people 65 years old and over. The 65 years old threshold is determined by the average working life period, which ranges between 15 – 64 years old. Additionally, it metaphorically represents a threshold also in terms of life style changes. On the one hand, older adults at 65 years old enter in a new stage characterised by full retirement from their jobs. On the other hand, the physical and mental decay is more apparent. Our prime is in our 20's (OECD, 2015, b).

Historically, the age related threshold of older adults was introduced at the end of the 19th century with the advent of the state pensions. Before, an older adult was really a flexible term framed by multiple parameters such as poverty levels, public finances and before all the public opinion (OECD, 2015, a). Nevertheless, the term old adult underwent a reorganisation and characterisation process during the 20th century. Nowadays, it has had a similar process. In fact, the term "older adult" and "older dependency" are likely less associated with the age of people (OECD, 2015, b). Therefore, it is more important to look towards the years left than the years lived. This

introduces a new perspective in age evaluation (Sanderson and Scherbov, 2007).

Fundamental contribution in this reorganisation and characterisation process must be recognised to two social historians: Peter Laslett and Bernice Neugarten. Both of them subdivide the life cycle into new different life stages such as "childhood" and "adulthood." This could arise just for a particular historical condition. On the one hand, Laslett (1989) coined the term "third age" for the first time in one of his essays. It then became part of a wider 1989 publication: *A Fresh Map of Life*. In particular, the author bound the new socioeconomic and cultural patterns such as intellectual, cultural, economic and demographic changes with alternate life stages. In these new stages, Laslett (1989) described the advent of the "third age" during the 1950s. Nevertheless, the "third age" affirmed itself in a specific niche of the social structure only in the 1980s. The strength of this study lay in its generality concerning not only the individual scale but also to a national population as a whole (Simpson, 2015). The rise of the "third age" is the final outcome of process started in English speaking countries during the 19th century before the economic model shift and industrialisation. *"The lives of American and British persons now last not far short of twice as long as the lives of their predecessor did in 1900, and at all times previous to that…the numbers of those who are past their sixty-fifth birthday, moreover, have risen some three times in both countries during the same period"* (Laslett, 1989, p. 7). Laslett called this transitional period as "secular shift." This reorganisation was possible also due to better nutrition and living standards, healthcare systems and reduced social deprivation. Its shift can be more easily understood by observing a rectangular survival curve which illustrates that deaths are concentrated in later years and thereby the "third age" is extended and the "fourth age" – the latest stage of the life is shorter.

Furthermore, Simpson (2015) in his *Young-Old:Urban Utopias of an Ageing Society* observes that Laslett's "secular shift" has a more powerful impact and stronger effect

if it is taken into consideration within in a biological and evolutionary context. For example, the *Homo Sapiens* as a species have a biological history which lasts for more than two hundred thousand years. This "secular shift" happened very rapidly in just over a hundred-year period. Laslett (1989, p.92) underlined the importance the diversity that of "the third age" embodies: *"There is disturbing evidence that older people are more unequal amongst themselves in their command of resources than those in other age groups, and even more challenging indications that the rich amongst the elderly may have become so at the expenses of their juniors as well as of their age mates, among other reasons because of the way in which the welfare state has operated over the last 30 years."* In order to do that, Laslett (1989) introduced the "third age indicator" as an analytical tool. It is composed by three indicators. The first one defines the appearance of the third age in the majority of people who reaching 25th birthday expect to live until 70 years old. The second is more pragmatic and is related to a 10% threshold of the population to be 65 years old or over. The third is defined by a mathematical relationship between the population surviving to 70 years old and the population surviving to 25 years old. This gave a quantitative dimension to Laslett's study (1989, p. 91) which was central for the definition and characterization of this new age group:

Few, or very few, of a large number of British wives, widows and spinsters who since the 1950s have lived long enough after twenty five to satisfy the requirement laid down for the third age have been in a position to live a third age as it is conceived in this book. Leisure, independence and education (this is especially so in Britain), have been still are lacking as well as money, and this for most men as well. It could well be said that the principles and ideas of third age living are a mockery for the poorer old, who have been and lamentably still are, so large a proportion of those in retirement.

Therefore, only when some additional conditions such as economic independence,

and time, are shared by a broader portion of the population, it is possible to consider a more the massive shift effective:

Time, or leisure rather –and a means to use it – has ceased to be the monopoly of an elite made up of hundreds, thousands, or at most in tens of thousands of persons. It is the becoming of a commodity of millions of our citizens, our elderly citizens, those in the third age. (Laslett, 1989, p. 202).

On the other hand, Neugarten (1974) introduced the term "Young – Old" a few years before in one of her essays. This term framed a wider and changing socioeconomic context in order to describe the advent of a new group of older adults. Neugarten underlined the importance of the comparative study between developed countries such as the USA and underdeveloped countries such as Brazil. This revealed the new age pattern. "*During the period 1965 to 1970 roughly 41% percent of a national population was under age 15 and only 3% was over age 65. By contrast in the developed nation the parallel figures were 27% under 15 and 10% over 65*" (Neugarten, 1974, p. 188). Consequently, Neugarten (1974) could define some of the "Young Old" prevalent aspects were the extended longevity compared to previous older adults groups and the retirement. Neugarten (1974, p.191) wrote: "*The group of people between 55 – 75 years old whose lives are marked by a fundamental aspect: the retirement. Moreover, this social group is relatively healthy, relatively affluent, and politically active. A different stereotype from the older people as sick, poor and isolated.*" Therefore, members of this new age group presented high level of education, relatively high economic stability, a reasonable amount of free time, and thereby able to actively contribute to their community from the social and political perspective (Mumford, 1956; Neugarten, 1974). Different from the middle-age group, the "Young – Old" are free and independent from traditional social and domestic responsibilities. In fact, their household was essentially composed by the "Young-Old" couple or singles because their offspring

have already left the domestic nest.

In the 1950s, Munford (1956, p. 192) wrote about a rough differentiation of age groups. He could recognise an early affirmation of a new age group between the "middle age" and the "old age:"

The first which begins around the age of forty five but may not be final for another twenty years brings liberation from biological reproduction and increasing detachment from the active nature of children within the family. For the sake of their growth and independence, young people start at the earliest possible moment to live by themselves. The second stage in senescence is that of economic retirement withdrawal at the age of sixty-five often enforced by beginning pension provision from the active working life. Unfortunately, our wide practice of automatic retirement often brings on a severe psychological crisis. The final stage that of physiological deterioration is more variable than the cessation of reproduction or work. Whether the old are happy or bitter, active or frustrated depends party upon how long the period of health and vigour is in relation to the covered by the lapse of biological functions that leads to death.

In this context, it is possible to consider the whole life cycle with a quadripartite structure as argued by Laslett (1989). First, there is a period of dependence, education, interaction and socialisation, all of them based on a certain immaturity. Second, the following period is characterised by independence, responsibilities, economic saving moved with a sense of maturity (Young-old, Go-gos or Autonomous retirement age). Third, this period is of professional satisfaction (Fragile retirement, old-age in transition or Slow-gos) and the fourth period is of final dependency and death (Dependent old age, Advance elderly or No-gos) (Huber, 2008).

This quadripartite structure opens up the way to the "Third Age" in the development

a new ageing process. Hopflinger (2008) labelled this as "new models forms and for ageing." The author attributed to the "third age" characteristics of an augmented flexibility while ageing. Additionally, they are more active, a certain predisposition in long life learning, etc. This definitely confirms that future generations of older adults will present a diverse way of ageing. Consequently, some scholars define this new ageing process as "positive ageing" (Olivier, 2007). Additional, this links the ageing process to new aesthetic values. For examples, Olivier (2007) describes how the orientation towards liminal revitalizations, transgression or renewal is stronger between this new age group. In particular, the new older adult shows an interest in modifying his or her body and disguising the inviable changes that occur with ageing through liposuction, breast enhancement, face-lift, hormonal or nutritional supplements (Huber, 2008) or clothing exercise where the grandmother starts to dress as her daughter and diets. Additionally, drugs such as Viagra or HRT are used in order to bypass sexual limitation that arrives with an advanced stage of life (Olivier, 2007). These come along with an increased number of divorces also between long-standing couples, and a greater geographical mobility (Hopflinger, 2008). Calculation and maturity (Huber, 2008) are less present in this new older adult (Olivier, 2007).

The everyday increasing use of information technologies (IT) and other technological devices cannot be excluded from this speculative vision in alternate ageing processes. For example, most of the older adults of today have a negative approach to technology and thereby delivering supporting services through technology is difficult almost impossible as well as to access to them. However, the attitude will be different in tomorrow's older adults towards them (Burke et al., 2015, Hopflinger, 2008). The "Third-Age" of today is definitely more digitally aware than previous generations. The "Third-Age" of tomorrow will not only be digitally aware, they will integrate it into their every day as an essential rather than an extra asset (Claudel and Ratti 2016). Previous material patterns become less relevant than informational ones in envisioning

a new human condition for the "Third-Age" of tomorrow, and potentially the physical fusion between 'biological and machine entities' – the digital augmented body will be strengthened (Simpson 2015).

Nevertheless, older adults represent a great resource for the society as a whole. They are a source of social and economic potential that should not be segregated in some long term care and retirement utopia (Simpson, 2015). Therefore, this implies their engagement at different levels such as education, community activities, etc. It redefines the notion of leisure as not necessarily synonymous with idleness and thereby just an end of itself (Laslett, 1989). Hori and Cusack (2006) also confirmed the importance of engagement in a recent paper. The authors argue that one of the most important factors for a "positive ageing" is social participation of seniors and their education (European Union, 2016). Mental and physical decline are inevitable with ageing, although older adults can maintain and sometimes improve their abilities and skills through their social engagement. Once again, learning has a central role a healthy and empowered aged population (Hori and Cusack, 2006). In fact, Neugraten (1976, p.198) was able to recognise their great potential:

Will they be the first to create on large-scale new service roles and to offer their service to the community without regard to direct financial remuneration? If as seems presently true the young old will not form a strong age group identification of their own, they might become the major agents of social change in building the age irrelevant society. If they create an attractive image of ageing, thus allay the fears of the young about growing old, and if they help to eradicate those age norms, which are currently meaningless, and those age attitudes, which are currently divisive, they will do the society an untold service. Theirs in an enormous potential.

However, not all older adults have the socio economic potential. In fact, the poverty

rate among this age group should be considered. In this regar, the older adults should be differentiated between younger old (66 to 75 years) in which the poverty rate is lower than older old (over 75 years old). There are also differences in term of gender. The poverty rate for men is equals to 8.4% and for females 12.4% of the total (OECD, 2015, a). Therefore, engagement may positively contribute to reducing the negative aspects related to ageing.

Considering this, Sassen (2014), in her discussion surrounding a globalised economy, puts emphasis on the proliferation in the expulsion of certain socio-economic groups from everyday situations characterising urban settings. Historically, this tendency was forewarned in advance by Neugarten (1976). She provocatively described high schools, colleges and retirement communities as segregated areas or age ghettoes. In particular, Neugarten untangled the connection between the three settings and the economic and social differences of its occupants. This allowed the author to demonstrate that these settings not only produce segregation between different social and age groups but also a segmentation within the same groups. According to each group member's economic circumstances and social background, they could access specific health care or education services offered by the market. Consequently, as Sassen (2014) pointed out these phenomena should not be considered as simple black spots while they should be embraced as opportunities. This may push professionals such as designers to question in depth conventional solutions while it may foster the adoption of new one. Nevertheless, sometimes initiatives that promote social inclusion (Piškur 2014; WHO 2001; Rosenbaum and Stewart 2004; Cerniauskaite et al. 2011) often fail (Costa-Font et al., 2009). New solutions must be carefully planned. They must have a more comprehensive approach which tackle not only a specific group but the society as a whole (OECD, 2015, b). *"A vision for ageing society should not exclusively target the older people population. They have to include societies for younger cohorts and co-ordinate the benefits for both generations"* (OECD, 2015, b pp.69). On the one

hand, this essentially confirms that older adults will have a central role in addressing socio economic challenges informed by the new demographic structure. On the other, citizens want to be active, and actively to contribute (Burke et al., 2015).

A Paradigmatic Shift inside The Family Structure

The English word of 'family' is a polysemantic word used to describe a conjugal pair and their young, the members of a household a range of bilateral kin or a patronymic group usually associated with title. There are wider semantics extending to the human and non-human species.

(Laslett, 1972, p. 103)

The *Cambridge Dictionary* (2012) identifies "family" as a collective name. It synthesises not only a group of people but also the correlated social and economic patterns. Over time, these, inevitably, addressed the family's structure. Consequently, the family structure embodies its own history or, as Laslett (1972) stated, series of histories. Historically, it is possible to identify three main phases of the family structure:

1. The ancient society was based on the "large patriarchal family." It was mainly diffused in eastern countries such as India, Japan and China. In this structure, the patriarch had almost an absolute control on all the members such as wife, unmarried daughters, sons, their wives and children. Additionally, the urbanisation rate was very low, and thereby the majority of the population lived in rural areas. In these settings, the collaboration among family members was fundamental for the group's survival.

2. In medieval time, "the large patriarchal family" evolved into the "small patriarchal family." This transformation mainly interested in the urban areas. This structure presented a husband, his wife and children. Often, one or more unmarried

brother or sister of the couple or other relatives was part of the structure. It was a consequence also of a change in the economic/professional model. In fact, the rise of craftsmanship declared inappropriate the "large patriarchal family."

3. In the 18th century, the industrial revolution forced "small patriarchal family" into a decomposition. The family structure turned into the "democratic family." It was expression of democratic principles, which permeated into the domestic environment as well as the economic and social domains (Laslett, 1972). Domestic environments were not anymore synonymous with inequality and segregation (Sennett, 1993). Different from the previous structures, this type was characterised by the notion of temporary. It begin with a marriage of a couple, grows up with the birth of their offspring and shrinks with their departures. The death of one of the members of the couple indicated the end of the family (Laslett, 1972).

This underlines the connection of the family structure with the socioeconomic and demographic patterns of a society, as stressed by Wall (1972; Collins 2015). The relational complexity of the family, kinship, has an evolutional disposition (Blunt 2005; Cox, 2013; Easthope et al. 2015; Dowling and Power 2012; Gram-Hanssen and Bech-Danielsen 2004; OECD 2011). Nowadays, the "democratic family" present a totally different composition. It will change again and probably more quickly than before. Olsberg and Winters (2005, p.87) described this new structure as *"the post-modern family in which the nuclear family following divorce and serial marriages creates and redefines more blended familiar boundaries or single parent families, childless couples and transformation within traditional ethnic families."* The nuclear family will not die out as written by Huber (2008, p.70) although it will be supported by an extension, "through choice of relatives." This emphasises the emotional support in a totally different socio-economic system. Additionally, this moment in history with no demographic

precedents allows a greater number of middle-aged and older adults with parents still alive. In fact, more children get to know their grandparents, and great grandparents (Dobriansky et al., 2007). In a 1972 key study on the household structure by Laslett (1972), the author differentiated the household notion from the dwelling one. First, the household is the shared location by a group of people who share relationships and activities. Secondly, the dwelling is the space occupied by a single individual and no other inhabitant who present a kinship. The different demographic and socio-economic models, has determined a household fragmentation in which shared intergenerational spaces have become disconnected spaces occupied by older and more isolated parents (Shirahase 2014; Laslett, 1989). Mumford (1956, p.191) while investigating the relationship between family structures and built environments, foresaw some of the possible risk in the forthcoming socio-economic changes: *"The breakup of the three generation family coincided here with the curtailment of living space in the individual household; and from this physical constriction has come social destitution as well."*

Over time, the "elementary family" as described by Goody (1972) has not had substantial changes. This consistency can be found in different countries. Inevitably, the recently new demographic structure as well as other socio-economic factors such as labour market insecurity, difficulties in finding affordable housing, expensive childcare, different lifestyles, etc. have their repercussion of the family formation and thereby structure (OECD, 2015, b). In particular, the fertility rate is strongly affected. Since the 1960s, it has been decreasing (OECD, 2015, a). This has a direct influence not only on the family structure but also on the total population of a country. For example, the Japanese are decreasing in number with direct implications on the built environment (OECD, 2012). The terms variation and variety are central for the understanding the "household" phenomenon. Different successive economic models and geographical areas (Goody, 1972) have informed these two terms. In particular, the "household" as the space occupied by the large patriarchal family, the small patriarchal family

and the democratic family can be considered composed by two different units: the "family unit" and the "economy unit." The "economy unit" in turn present other two sub-units: "production unit" and the "consumption unit" (Goody, 1972). Consequently, the "household" structure has changed according to the changes of the "economy unit." For example, the alternating of different economic models such as the agricultural, and the industrial has been strong. The agricultural economic model, for instance, required a large labour force. The "production unit" and "the family structure" were strongly interrelated and thereby the household included a wider kin. This close interrelation between the two units was interrupted after the Industrial Revolution (Goody, 1972). It is interesting to mention here that people have attempted to embed the collaborative nature of this kind of household in more urbanised areas. This has been the neighbourhood (Goody, 1972). Furthermore, geography and culture have been the other two factors that together with the "economic unit" and socio-economic model shaped the "family unit" and the household structure. For example, the household's composition and dimensions were the result of an in depth connection of its members with the territories. The low labour mobility supported shared way of living and helping together.

The following section, therefore, will examine the variation of the household structure throughout different time and geographical areas. It is circumscribed to the four geographical areas of interest for this study: the United Kingdom, The Netherlands, Finland and Japan. The household structure includes members who live in the same dwelling such as dependent children of all ages (OECD, 2011). Over time, England has had the "family unit" that has been always nuclear in dimension. Armstrong (1972, p. 214) wrote: *"I have said a little or nothing about possible changes in the mean size of the nuclear family and sibling groups at the core of each household but by contrast these may have been quite slight in most communities."* It is difficult to comprehend the intensity and relevance of the relationship among family members. These were

triggering elements for the formation of a shared or separated household structure. Additionally, between the 19th and 20th century servants' were considered members of the household. This, as well as their successive disappearance, affected its dimension (Wall, 1972). However, the English household decreased from 5.5 members in the 1850s, to 4.5 people in the 1950s. In more recent years, it significantly has shrunk. In 1980s, it counted 2.51 members while only 2.12 in 2011 (OECD, 2011; Wall, 1972). The Netherlands, instead, had an economic model revolving around farming. As in England, also in this country the servants contributed in the variation of the households' dimension (Van der Woude, 1972). Nevertheless, Dutch household and family structure flexibility gives reason to suppose that the kinship between a nuclear family were less strong. In fact, the Dutch household shifted from an average of 7.7 in the 19th century to the nowadays 2.28 people (Van der Woude, 1972; OECD, 2011). Additionally, many contemporary households do not have children (OECD 2011) – Figure 9. In Finland, the 17th century traditional families were very large. In fact, parental houses included several married brothers. This was a direct consequence of the economic model centred on the agriculture and farming (Moring, 2002) together with the high infant mortality and migration patterns (Hill and Milewski, 2007). In particular, the most common household settings included the parents and only one married son. The term "large family," however, was used only for household containing three or more married couples. These were 22% to 30% of the totality of the households (Moring, 2002). Over time, the number of households increased while they decreased in size. In the 18th century, the average size of the household counted 8.2 members. It decreased to 7 at the end of the same century. In the 19th century, the Finnish household consisted of 5.5 members. The majority of households, therefore, were composed by nuclear families. During the 20th century, the household size had another decline. At the beginning of the 20th century, it was 3.2 (Moring, 1993) while at the end of the same century it reached 2.14 people. Unexpectedly, it raised a little in mid 2000s to 2.20 members. Therefore, the percentage of household with three or more children is today

21% of the totality higher than the European average (OECD, 2011) – Figure 10.

Even if presenting its idiosyncrasies, Japan underwent to a parallel process. In particular, between the 16th and 18th century, the household composed by two or more married couples and their related children (20-30 members) was replaced by a household of only one married couple and their children. In 1850, the average household was made up of between of an interval between 3.5 and 5 members. The largest groups consisted of 5 – 5.5 people. The same socio-economic achievements that have been contributing to the shrinking process of the European household size such as the fertility rate, the birth rate, and the death rate among children have had their impact also in Japan. Additionally, Japan has been very common in the practice of adoption, both of male and female children (Hayami and Uchida, 1972). The fast transition from an agricultural society to an industrial society, for example, happened very rapidly. The percentage of agricultural occupation moved from the 38.5% in 1955 to 19.3% in 1965. Therefore, the lack of necessity of agricultural labour not only influenced the birth rate but also the number of servants in the household (Hayami and Uchida, 1972). The household dimension consisted of 4.97 members in 1955, while it fell dramatically to 4.05 in 1965, to 3.23 in 1975, and in the following three decades to 1.75 people (Nakane, 1970). The parallel rapid urbanisation had also affected this process (Fukutake, 1989). This implied an intense population metabolism in terms of people turn over. Inevitably, it required a small household (Smith, 1972). Consequently, it is possible to assume that the Japanese household dimension was relatively little or later influenced by economic aspects compared to other European countries. Industrialisation, for instance, started later. Hayami and Uchida (1972, p.531) describe this as: *"I am convinced that mean household size in Japan changed little from the early seventeenth century at least until 1955 and must have been fairly constant at about 4.9 persons."*

Here, it is important to introduce the Japanese notions of family "IE," and village "MURA." The Japanese term "IE" is referencing to the idea of "family system" (Fukutake, 1989).

For example, a new-born in a family is added to the family register, he or she does not have a personal birth certificate (Ozaki, 2002). However, it is a comprehensive term that includes the properties such as the house occupied by a family. This concept strongly underlines the collective meaning of the group that any of its members can be excluded for the protection of the "IE" (Nakane, 1970). This incredibly weakens the kinships ties between relatives. For example, a wife who comes from outside has a bigger importance compared eventually to sister or daughter who have moved in a different household (Fukutake, 1989). Besides the concept of "IE," the group formation has an important function in the social structure of Japan (Fukutake, 1989). Actually, it represents its substratum (Nakane, 1970). Neighbourhoods and neighbours have a strategic role in daily life as well: "You can carry on your life without cousins, but not without neighbours" (Fukutake, 1989). The geographical location of a housing group, physically defines the village, but the functional group needs an internal organisation that connects the different households such as the tax system (Fukutake, 1989). This relationship, which connects the different households and its members, can have a vertical and horizontal organisation. The first one tends to create differences among the members of the neighbours influenced by a seniority system instead of a meritocratic one (Fukutake, 1989). The second types of ties are not strong enough to challenge the vertical relationships. Therefore, new members or participants are not able to break through them. In fact, Japanese men accept these one to one relationships but they do not accept them in a group condition context (Nakane, 1970). This is conceptualised in the Japanese term "MURA" which stands for "village system" (Fukutake, 1989) which had also a fundamental political and governmental role (Bestor, 1985). Nevertheless, both the "IE" and the "MURA" are important notions for the understanding of pre-modern Japan. Inevitably, these concepts underwent stronger changes during the centuries. In particular, they have a less relevant role in contemporary society (Nakane, 1970; Elliot, et al. 2013;). On the one side, the "IE" is disappearing in order to provide space for reclaimed independence from the younger generation of families. This is particularly

happening in urban areas, in which families refuse to live with the parents of the husband. Instead, the number of families living with the wife's parents is increasing (Laslett, 1972; Hayami and Uchida, 1972). In fact, the nuclear family, even if looking for detached domestic environments, find accommodation in same buildings with other relatives such as the wife's mother in order to define the proper balance between independent living and preserving kinships and support each other. On the other, the "MURA" is the group in which the members do their existential economic activities not simply a local geographical group. Therefore, this conceptual village is nowadays represented by the professional and sociological relationships (Fukutake, 1989).

Nowadays, it counts only 2.71 members (OECD, 2011). In this scenario, the older population (+65 years old) is living alone or with his or her partner has been increasing constantly (respectively from 4% to 16%, and from 7% to 37% between 1960 and 2006) (Muramatsu and Akiyama, 2011; Shirahase, 2014). The only preserved form of multi-generational household is where older adult parents have to provide long-term support to "parasite singles:" adult children who have been struggling in finding a professional career (Shirahase, 2014) – Figure 11.

Taking this into consideration, the new demographic structure and socio-economic models has directly affected the household structure in terms of dimension and composition. On the one hand, the majority of family members will be over 65 years old by 2020, and the number of older adults with physical and mental impairments will increase as well. On the other, the household dimension is significantly reduced to an average number of 2.55 members (OECD, 2011). This emphasizes the impact on national economies and health care systems. Historically, the family has had a central role in the care provision. A shrunk household within an ageing population redistributes the care and socioeconomic burden among smaller group of informal caregivers: the "sandwich generation" (European Union, 2016). Inevitably, their economies and the mental and physical wellbeing is negatively affected. In fact, Burke et al. defined the

People per Household 18th Century - 21st Century
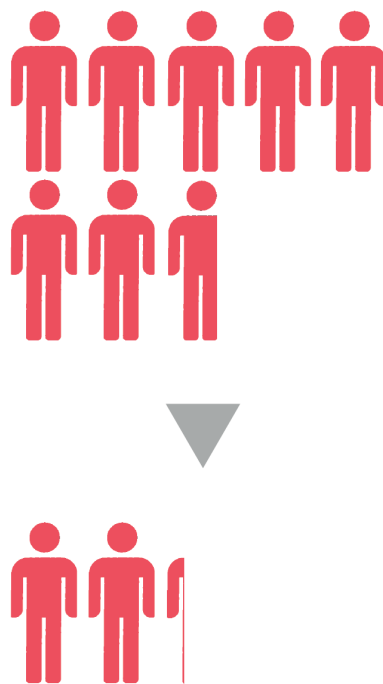
The Netherlands

Figure 9. The Dutch Shrinking Household Structure. Data Source OECD © Davide Landi

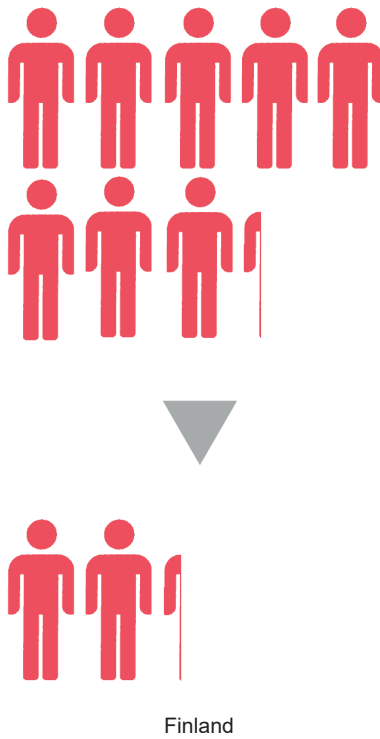People per Household 18th Century - 21st Century

Finland

Figure 10. The Finnish Shrinking Household Structure. Data Source OECD © Davide Landi
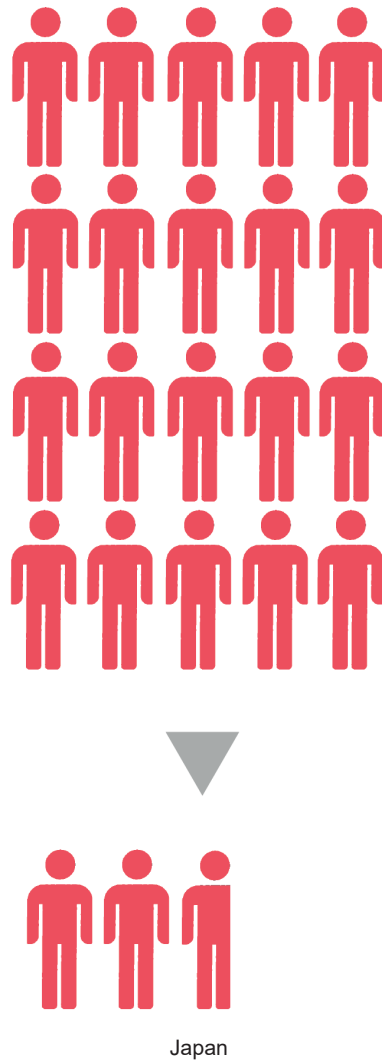
People per Household 18th Century - 21st Century

Japan

Figure 11. The Japanese Shrinking Household Structure. Data Source OECD © Davide Landi

"sandwich generation" as the group of adults who are responsible of their older parents, children and they are working, and they are experiencing worse health conditions (Burke et al., 2015). Nevertheless, the opportunity for experimenting and creating a new economy have risen again. The "silver economy," for example, is the term that identifies a group of activities, jobs related to the bigger number of older adults and health care industry (European Union, 2016).

This combined overview on the household composition (i.e. the "production unit," the "consumption unit" and the "nuclear family;" Laslett 1972), its evolutionary nature and the new demographic structure opens up the question to more socially and economically sustainable solutions (European Union, 2016). This necessity of more socially and economically sustainable solutions implies challenges crossing different political and professional bodies such as policy makers and designers (Burke et al., 2015; OECD, 2012). The commercial world is not excluded. This reveals a complexity in which a wider range of needs must be satisfied (Burke et al., 2015).

Section 3: The Role of Policy Makers

Institutions and regulations have had a central function in the introduction and adoption of different care models, care facilities, and thereby care and social responsibilities. The contemporary demographic structure shows an increasing necessity towards long term dependency-related services. Inevitably, the contemporary socio-economic structure cannot cope with it. The risk is real for the socio-economic sustainability of the existing heath care systems (European Union, 2015, a). A care system shift is required (European Union, 2015, a). Investments in technologies, the built environment and human capital are central in this shift (European Union, 2015, b). Consequently, this reveals a knowledge gap that the thesis attempts to fill through an unique interdisciplinary theoretical contribution. Whilst it concerns the built environment,

governments and policy makers must contribute to economic and political backing as in the past (European Union, 2015, b). This section, therefore, untangles the historical relationships between policies and older adult care facilities. It concerns the Dutch, Finnish and Japanese contexts as well as the British one. Additionally, the analysis provides a more general picture on common measures taken by the above-mentioned national governments in order to contain the socio economic impact of the new demographic structure.

In 1834, the United Kingdom issued an important legislation, which was known as the "Poor Law." This established a care system grounded on the notion of "lesser eligibility." People lacking employment, money or shelter, and those who were ill or without family support had access to some basic forms of institutionalised "relief." At that time, the most diffuse facilities were workhouses and voluntary hospitals. In particular, they housed counted respectively 11,000 and 50,000 patients. A report on the "Poor law" from the Royal Commission (1834) showed that half of the inmates were older adults (Peace, 2003).

At the beginning the 20th century, public opinion and local authorities started the debate on the quality of the provided services. The debate mainly revolved around the provision of free or paid care services: "to pay or not to pay." Consequently, the national government adopted a quality control (registration and inspection) system for private institutions. On the one hand, workhouses became Public Assistance Institutions. On the other, private institutions introduced Nursing Home Typology. In 1948, the Ministry of Health issued the "National Assistance Act," consequence of already changing demographic structure. Local authorities became responsible for the provision of accommodation to older people who needed care and attention. Consequently, this led to further segmentation among older adult care facilities. The care included provision in not only in nursing homes, but also in care homes (Peace, 2003).

Following the Second World War, the debate concerned the creation of new facilities and types of older adult care. The existing public care institutions were considered obsolete. In fact, the majority of older adults optioned for private institutions instead of workhouses and residential care homes provided by local authorities. Additionally, the hospitalisation of older adults with long term conditions was the rule. Consequently, the Ministry of Health (1962) issued a regulation limiting this phenomenon in order to contain the spiralling care costs. In 1975, the existing residential homes, nursing homes and geriatric hospitals run by private, public and voluntary sectors offered more than 250,000 places for older adults (Peace, 2003). Therefore, many of the residential care homes were entrusted to the private market. Older adults could access them thanks to the Supplementary Benefit Regulation which provided economic help. However, often older adults ended up in hospitals due to a lack in the effectiveness of the provided care before reaching crisis point (Cliftoned, 2011). In the 1990s, the NHS and the Community Care Act (1993) established the NHS as main care service provider, and encouraged home care against institutionalised care. This defined the differentiation between primary and secondary care, and the gatekeeping system (Robertson et al., 2013). Consequently, it attempted to contain the bubble potentially bursting due to an exponential increase of private care facilities, long with the spiralling economic cost of accessing them (Peace, 2003; Cliftoned, 2011, Mossialos and Wenzl, 2015).

Nowadays, mental health, and dementia care is an integral part of the service provide by the NHS. UK residents can access it. (Robertson et al., 2013; Mossialos and Wenzl, 2015). It is provided as primary and secondary care respectively by GPs, and specialists such as psychologists, independent psychotherapists, and specialised mental health care institutions (Mossialos and Wenzl, 2015). The private sector is the main provider of long – term care services, as in the 1980s. Local authorities or the NHS, thereby, economically support it (Mossialos and Wenzl, 2015). It combines health and social care (Mossialos and Wenzl, 2015). The contemporary architectural correlates reflect

their historical development. In particular, they embedded three different levels of care provision. First, collective housing where almost no medical care services are provided (154,000 places in 2007). In fact, home care is provided through community nursing services, which are private non-profit organizations. Informal caregivers who are members of the community nursing services benefit from tax deduction (Robertson et al., 2013; Mossialos and Wenzl, 2015). Second, there are retirement homes, which offer some medical care services (470,000 beds in 2007). Third, there are long-term care in residential homes or hospitals wards. Here, medical care services are provided at high level (70,000 beds in 2007). Furthermore, the British Government introduced in 2004 a dedicated fund for long-term care: the National Solidarity Fund for Autonomy. The statutory health insurance contributes to it through revenues from a once-year unpaid working day and local authorities (Mossialos and Wenzl, 2015).

An idiosyncratic relationship exists between policies and older adults care facilities in Japan. If fact, cultural assumptions permeated through this relationship. Over time, they defined the different areas of responsibilities and obligation (Hashimoto, 1996). Additionally, they influenced shaping not only the built environment, care models, but also the social and demographic patterns and contemporary lifestyles, in particular in old age (Traphagan, 1998). The Confucian ethic and the familiar piety placed the family as the central source of support for older adults. In fact, eldest children and wives of eldest children, were looking after parents, frail or not (Hayashi, 2011; Muramatsu, and Akiyama, 2011; Shirahase, 2014). The domestic context was synonymous with several resources. On the one side, the limited spatial environment of the multigenerational household was able to generate a familiar environment for the older members. On the other, it would simplify the definition of certain roles, rules and obligation among the informal caregivers (Hashimoto, 1996, Kose, 1998, a). In the 19th century, the Meiji Civil Code legally defined the "IE" system so this strengthens the historical care model based on the family. However, the long-term persistent or full-time family care for very

sick or disabled older adults' relatives was not frequently adopted because there was low survival rate due to an insufficient medical care (Hayashi, 2011).

Inevitably, this family-centred care model went through many changes according to social and economic achievements obtained during the centuries (i.e. social and health care policies, technological innovation, longer life perspective, etc.). The 19th century was also the time when a first example of "Poor Relief Legislation" was introduced. People lacking familiar support such as orphans, older adults over 70 years old or severely injured were supported with essential help (i.e. food). In 1929, the Japanese Government approved the "Public Relief Act". This provided a basic form of assistance as before to the people who did not have a familiar context helping them. Older adults could access to the benefits at the age of 65 years old. For the first time public almhouses were newly built in metropolitan areas, while in other areas, the government supported the conversion of existing buildings (Hayashi, 2011, Fukutake, 1989). In 1938, a National Health Insurance scheme was started and made accessible to industry workers (Fukutake, 1989; WHO, and Ministry of Health Labour and Welfare, 2012).

However, the social welfare and healthcare system were at a very low level in Japan and their underdevelopment was strictly connected to the relevant role of the "IE" (Fukutake, 1989). In 1950, in a Japan strongly depleted and destroyed after World War Two, older adult care was not a priority, therefore, the "National Assistance Act," appointed the local institutions as responsible for providing facilities in which dependent old people could live (Hayashi, 2011; WHO, and Ministry of Health Labour and Welfare, 2012). The admission to these facilities was subsequent to a family's request and an assessment process done by a local institution. Nevertheless, the role of the family and the care provided in a familiar context was still fundamental, so only the poor, lonely and frail were accommodated in these facilities. Older adults with chronic illness

and in need of medical support were still excluded (Hayashi, 2011).

In 1963, the "Elderly Welfare Act" brought the Nursing Homes into the Japanese scene. These were able to provide for the first time a service not only for lonely people but also for people who were presenting mental and physical impairments. In this case, if an older adult was admitted, the family or the older adult him/her self-had to contribute to the service according to their economic possibilities. In these same years, the Japanese government introduced the "Universal Health Care Insurance." This was able to partially cover older adults' medical expenses, so some medical treatments or medicine were still not accessible (Hayashi, 2011). In the 1960s also, the Citizens' Pension Law was approved so Japan entered in the list of countries with a universal pension scheme (Fututake, 1989; Hotta, 2016).

Besides this elderly care institutionalisation process, families still constituted the main support for their older members. The Japan Housing Corporation, which is now known as Housing Urban Development (HUDC), were supporting families by providing them Multi-Family dwellings to rent or to purchase (Kose, 1998, a). Unfortunately, this had a downside. Many of the older adults living in their households were victims of familiar abuse due to a lack of economic opportunities (i.e. no access to required medical support) or too busy familiar caregivers. Consequently, the government tried to address this situation by increasing the number of nursing homes (Hayashi, 2011). However, almshouses, nursing homes, any form of institutionalised elderly care was associated with the cultural concept of "OBASUTEYAMA": a legendary mountain on which older adults, no longer any more useful but just a socioeconomic burden, were abandoned by the eldest sons. This caused a stigmatisation of the institutionalised elderly care (Fukutake, 1989). Together, the "OBASUTEYAMA" notion and familiar abuse led to an increase in the suicide rate among Japanese older adults (Hayashi, 2011; Sieg, and Ha, 2016).

In the 1970s, public hospitals, not geriatric or psycho-geriatric facilities which that time did not exist, were the real alternative to almshouses or nursing homes. In fact, the hospitals were able to offer a higher number of beds and older adults over 70 years in old hospitalisation were free of charge or assessment process. Therefore, they were left in a hospital not only for the provision of medical care but mainly for social care. Older adults were less perceived as a socioeconomic burden by the rest of the society. This kind of support relieved the load of single families, in particular women (90% of domestic caregivers were female) (Elliot, et al. 2013), but exponentially increased the medical expenses of the country (Hayashi, 2011). Besides the abuse of public hospitals, retirement villages were introduced in Japan. The Japanese government reacted by issuing the "Elderly Care Act" in 1982. This abolished the free hospitalisation for people over 70 years old and monthly fees were introduced for seriously ill older adult inpatients (Hayashi, 2011; Hotta, 2016).

The shift from a centred family care to care by society and destigmatization of institutionalised older adults care was achieved with the Long-Term Care Insurance (LTCI) in 2000. The LTCI has been a long-time priority for the government and was promoted with the slogan "from care by a family to care by society" (Muramatsu and Akiyama, 2011; Arai et al; 2010, Hayashi, 2015; Hotta, 2016; Robertson et al., 2013; Mossialos and Wenzl, 2015). The LTCI principal target was to support older adults socially (Elliot, et al. 2013). This scheme has been funded by the tax system and insurance premiums paid by people over 40 years old. Consequently, extra-care fees and assessment processes were abolished. The LTCI rapidly became very popular but the use of public hospitals as older adults' retreats has been continued (Hayashi, 2011; Hayashi, 2015; Nakanishi, and Nakashima, 2014; Hotta, 2016). Therefore, Group Homes were introduced. They became one of the physical settings of this community-centred care model. Group Homes, behind the payment of proportionated fees, have been able to host older adults with particular needs (i.e. dementia) and provide care counselling

and support to older adults who wish to continue their life at home or community (Takeda et al, 2010). They foster active living akin analogous to an extended family setting (Hayashi, 2015). This "creates happiness" and people live well with dementia (Alzheimer Society, 2017). It allowed Japan to propose a pioneering approach, widely accredited, and community-focused in particular targeting older adults with mental and physical impairments such as dementia (Fleming et al, 2016; Alzheimer Disease International, 2015, b). This was the final stage of a programme started in the 1980s – Figure 12. At that time, the Alzheimer's Association Japan promoted a programme for the development of support group for people of Alzheimer called "TSUDOI-BA." These groups aimed to create informal settings and "sharing" such as companionship (Hayashi, 2015). Nevertheless, the LTCI redefined the concept of "health" (Hotta, 2016; Mossialos and Wenzl, 2015). Besides directly supporting older adults, the Japanese government has been adopting a series of policies targeting the Japanese society as a whole. These created a supportive social context based on the principle of subsidiarity. First, the older adults are aided by the informal network. When a more professional care is required, then professional caregivers provide their support (Hotta, 2016, Go-Un, 2017). Examples of the adopted policies are:

_ Increasing understanding towards dementia (i.e. dissemination of information; adoption of the 10 years nationwide campaign; dissemination of information to students of primary and secondary schools, etc.);

_Promoting research/development centred on dementia (i.e. improvement of diagnostic technologies; understanding of preventive measures against dementia; development of innovative and appropriate care models, etc.);

_Adopting measures towards early diagnoses of dementia so the provision of appropriate care (i.e. dissemination of information of care model guidelines; employment support
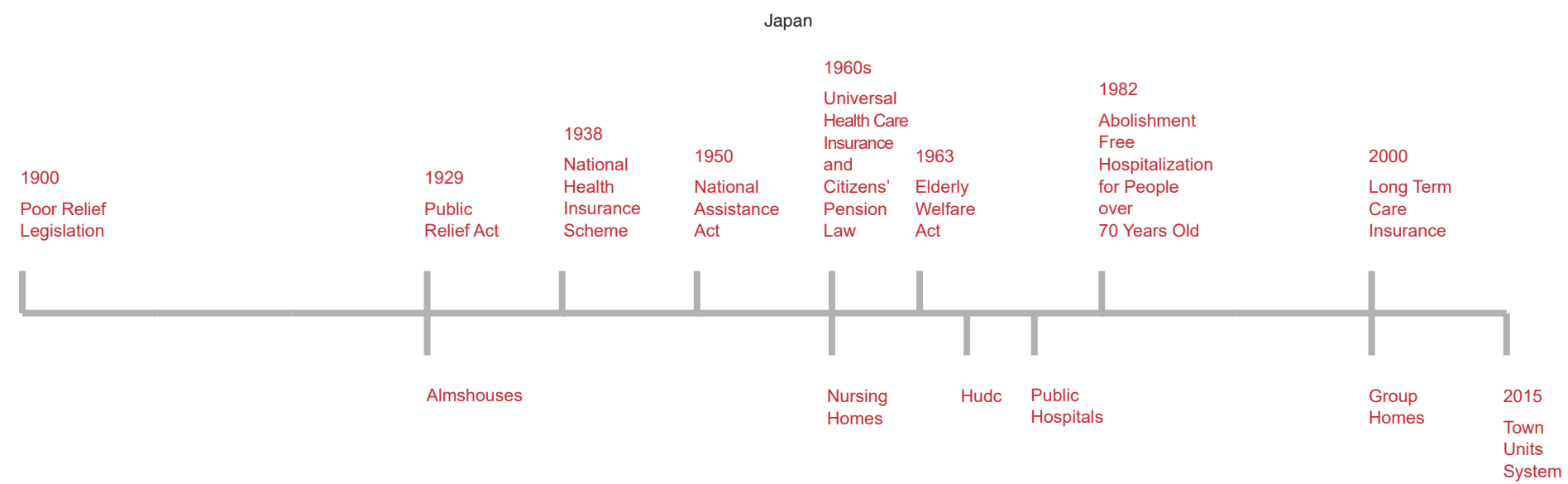
Japan

1960s

Universal
Health Care
Insurance
and
Citizens'
Pension
Law

1938

National
Health
Insurance
Scheme

1982

Abolishment
Free
Hospitalization
for People
over
70 Years Old

1900

Poor Relief
Legislation

1929

Public
Relief Act

1950

National
Assistance
Act

1963

Elderly
Welfare
Act

2000

Long Term
Care
Insurance

Almshouses

Nursing
Homes

Hudc

Public
Hospitals

Group
Homes

2015

Town
Units
System

Figure 12. The Japanese Architectural and Care Model Plastic © Davide Landi

129

for people with early onset of dementia; dissemination of proper information to a wider audience; etc.);

_Improving the care system framework based on "Dementia medical centres." (i.e. optimising the consultation network for families and patients; establishment of supporting lines for patients, etc.);

_Improving informational support for families and caregivers. Education and mobilisation of volunteers (around 5.4 million around Japan). (i.e. improvement of the coordination between social and medical care with the introduction of the "care navigator"; standardization of the care model; distribution of resources at the community level; etc.) (Hayashi, 2015; Hayashi, 2013; Arai et al, 2010; Takeda et al, 2010).

All of these initiatives are managed at the urban-ward level. The areas are identified as the "Town Units System" (Go-Un, 2017). Unfortunately, not all the described policies became effective due to a fragmentation between institutions and associations (Nakanishi, and Nakashima, 2014). However, some innovative models adopted since 2005 were also aided by the advent of technological equipment. Examples are: the "micro-functional community care facilities, dementia friends, SOS wanderers Network." (Hayashi, 2015; Sieg, and Ha, 2016; Alzheimer Disease International, 2015, b). In 2013, these policies were strengthened by a five year programme called the "Orange Plan." Inspired by the British Croydon Memory Service, it is based on the creation of an Initial-Phase Intensive Support Team which together with a local government dementia coordinator do home visits in order to provide advice and assessment. Additionally, the government wants to adopt the classification "person with dementia who required psychiatric inpatient care" in order to distinguish them from those who do not need hospitalisation. This will promote an optimization of the medical and economic resources (Hayashi, 2015; Alzheimer Disease International, 2015, a). Since then, other initiatives

started (i.e.Ibasho; Hearth Ring Movement, etc.) (Alzheimer Disease International, 2015). These initiatives have promoted the independence of any person as long as possible as illustrated by Alzheimer Disease International (2015, a) and OECD (2004). On the one hand, older adults stay in their own dwellings as long as possible (Kose, 1998, b; Kose, 2010). On the other, the Government has substantial economic saving in terms of older adult care expenses.

Nevertheless, due to the rapid pace of the ageing population process the Japanese social and health care models have shown their limitations of unfeasibility and unsustainability. On the one side, there is the overutilization of medical care services (Henke, et al., 2009). Japanese citizens are not linked to specific general practitioners. Therefore, they can freely access to different levels of care services without a gatekeeping system (WHO and Ministry of Health Labour and Welfare, 2012; Robertson et al., 2013). For example, Japanese citizens see GPs almost three times the average number of visits in other developed countries (Henke et al.,2009). Second, there is the adoption of advanced medical technology that coexists with more traditional medical approaches (WHO, and Ministry of Health Labour and Welfare, 2012; Hashimoto, 1996). A 2005 study showed that 32% of the population, for instance, still use traditional medicine such as acupuncture. (WHO and Ministry of Health Labour and Welfare, 2012). Besides an extended working life (Williamson, and Higo, 2007), alternative ways of supporting LTCI are required such as the time banking system in which volunteers earn time credits for caring for older adults of their community. This credit will be used for purchasing similar service by the older volunteers once old or for their relatives (Hayashi, 2011). On the other, it is important to recognise the inadequacy of most of the existing facilities and policies which has driven the social isolation of older adults, in particular, those who have physical or mental impairments (Bognar, 2008). Social isolation is a relevant issue both in urbanised and rural areas and cannot be torn down only with an educational programme for seniors (Hori and Cusack, 2006). This confirms

the substantial demand for innovative solutions matching the needs of different older adults (Muramatsu and Akiyama, 2011) – Figure 13.

In European countries such as the Netherlands and Finland, care policies and models have embodied the nature of welfare states (Morel, 2007). This was underpinned by a religious background such as Protestant, Roman Catholic, Jewish or humanistic base (Buss et al. 2004). The Netherlands, in particular, as in the United Kingdom initiated an institutionalization of the older adults' care system in the 20th century. Nowadays, there are around 490 nursing homes, 1,131 residential homes, and 290 combined institutions for older adults in the Netherlands (Mossialos and Wenzl, 2015). Historically, the Dutch system was based on the Bismarkian model. It combined public funds and private health insurance in order to cover the expenses of the health care systems (Robertson et al., 2013). The first nursing home was established in 1929. It accommodated patients with long-term illnesses (Hoek, 2000; Van der Voordt and Houben, 1993). However, the Dutch Health Care System is predominantly of private ownership. If fact, in 1941 the Health Insurance was still voluntary due to Sickness Fund Decree. Over time, the Dutch government has had regulated it through policies and acts. Consequently, the compulsory insurance system was gradually introduced between 1941 and 1965. In 1964, the Dutch Government approved the Sickness Funding Act and the Act on the Joint Funding of Elderly Sickness Fund, thereby social care insurance appeared for the first time in Europe (Buss et al. 2004; Robertson et al., 2013). They provided compulsory insurance schemes to people in similar comparable employment. Additionally, the Dutch government adopted the Exceptional Medical Expenses Act in 1967. It has covered the expenses related to long-term care services (Buss et al. 2004; Robertson et al., 2013). The number of nursing homes started to rapidly increase (Hoek, 2000). Furthermore, these policies also encouraged older adults to move in to newly built housing complexes. They accommodated older adults who required a slight level of provision of care, while their old houses were given to young
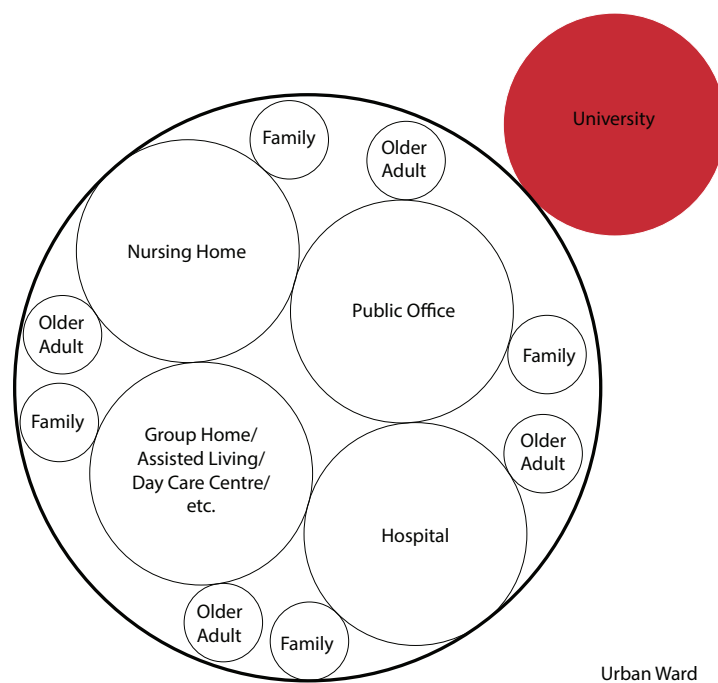
Family
Older Adult
University
Nursing Home
Public Office
Older Adult
Family
Family
Older Adult
Group Home/
Assisted Living/
Day Care Centre/
etc.
Hospital
Older Adult
Family
Urban Ward

Figure 13. Japanese Care Strategies: Town Unit System. Disposable Care Facilities at the Urban Level © Davide Landi

families (Engdom, 1997; Van der Voordt and Houben, 1993). In the 1970s, there was also a focus on hospital construction. The Dutch government introduced the Hospital Provision Act in 1971. It regulated the location of hospitals as well as their capacity and standards (Buss et al. 2004). For the first time, hospitals adopted geriatric programmes and wards (Hoek, 2000). Housing for the elderly, instead, suffered of a shortage as well as a lack of economic control. Therefore, the Dutch government turned them into care homes. These were more institutionalised settings, which offered private rooms and apartments, as well as communal spaces such as recreational areas, offices for the staff members, and care and supporting care spaces (Engdom, 1997; Van der Voordt and Houben, 1993). In the 1990s, the Sickness Funding Act was amended in order to financially support students, while limiting the sickness ceiling funds under a certain level. For example, psychiatric care and support ware moved from Sickness Funding Act to the Exceptional Medical Expenses Act. Consequently, it could address the needs of a wider group of people such as the increasing number of older adults (Buss et al. 2004; Hoek, 2000). In 1991, The Dutch government introduced the "Personal Budget" policy. It economically supported the purchase of formal or informal care services from private institutions (Morel, 2007).

Nevertheless, the Sickness Funding Act was substituted by the Health Insurance Restructuring Scheme in 1998. This was a consequence of a rising awareness of a new demographic structure of the Netherlands. In fact, it attempted to improve the insurance position for people over 65 years old (Buss et al. 2004). These together with policies, encouraged older adults to remain in their own homes, and as fully integrated as possible, within the "normal society" (Van der Voordt, 1997). The quality of the housing and its contribution to the physical and mental well-being of elderly people became central (Van der Voordt and Houben, 1993). Consequently, they defined a more clear differentiation of care homes according to the level of care provided (Engdom, 1997). These were independent housing, adaptable housing, care homes,

nursing homes and geriatric hospitals (Engdom, 1997; Hoek, 2000; Hoek et al, 2003; Van der Voordt and Houben, 1993; Steverink, 2001). The independent housing offers home care and other community activities. The adaptable housing is intermediate facilities such as sheltered housing. They offer catered private accommodation for the elderly as well some common spaces such as common multipurpose room, gym, etc. Older adults require a medium level of care provision. The care homes, nursing home and geriatric hospitals are more institutional facilities. Older adults require a higher level of care provision (Van der Voordt and Houben, 1993; Van der Voordt Interview, 2017, Hoek, 2000) – Figure 14.

In the 2000s, the increasing number of older adults negatively affected the economy of the health care system. Consequently, the government reformed the Exceptional Medical Expenses Act in 2006 by introducing the Social Support Act. On the one hand, this introduced a single compulsory private health insurance provided by a set of private not-for-profit insurers (Robertson et al., 2013). On the other, it attributed to local authorities such as Municipalities the responsibility for the provision of certain care services such as medical aids, home modifications, services for informal caregivers, preventive mental health care and transportation. Municipalities are funded by local taxes and thereby these services might change from place to place (Mossialos and Wenzl, 2015). This attributed more flexibility to the conventional differentiation of care homes and thereby social care models which tackle the well-being of older adults instead of simply protecting them (Van der Voordt Interview Interview, 2017). Following an increasing awareness of older adults' disabilities such as dementia and the technological advent, the conventional care homes differentiation accommodates a wider range of older adults. Examples are small scale annexes of a nursing home. They are usually physically connected through an indoor corridor and can accommodate between 30 - 60 older adults. This is seen as normalised group living. They consist of groups of four to thirty six residents. The older adults live in small familiar groups of six

The Netherlands

1964
Sickness
Funding Act
and
Joint
Elderly
Sickness
Fund

1941
Sickness
Fund
Decree

1967
Exceptional
Medical
Expenses

1971
Hospital
Provision
Act

1990s
Sickness Funding Act
and
Exceptional Medical
Expenses
Amendments

1991
Personal
Budget
Policy

1998
Health
Insurance
Restructuring
Scheme

2006
Social Support Act

2015
Health
Insurance
Act

1929
Nursing Homes

Houses
for the
Elderly

Geriatric
Hospitals

From
Houses for the
Elderly
to
Care Homes

Independent
Housings

Adaptable
Housings

Care Homes

Nursing Homes

Geriatric
Hospitals

Care Zones

Experimental
Projects

Figure 14. The Dutch Architectural and Care Model Plastic © Davide Landi

136

people. They have a nursing home referral and are supported by a specific number of nurses.

Projects such as the WiekslagKrabbelaan and Weidervogelhof are more experimental. The former is a nursing home which gives an environment that is a familiar and secure environment to residents with dementia. It fosters interaction with the community and the neighbourhood. The latter, instead, is composed of nine buildings scattered through the neighborhood for older adults with intensive long-term care needs. They are managed by a collaboration between housing associations and a care provider. (Tinker et al. 2013; Van der Voordt and Houben 1993; Van der Voordt, 1997).

In 2015, the Netherlands adopted the Health Insurance Act. This produced structural changes to the Exceptional Medical Expenses Act. It supports only people requiring intramural long-term care such as older adults with psychiatric disorders, and people with learning, sensory, or disability conditions; while the Health Care Act covers nursing and care activities (Mossialos and Wenzl, 2015). Nevertheless, the above-mentioned strategies, services, and architectural correlates are managed and available at various urban scales. The Netherlands proposes "Care Zones": areas in a town or a village in which a specific set of services is present within 500 m of a dwelling (Smets 2009). Here, at last, there is a complete convergence between the two nations. The new models pay attention to the well-being of older adults (i.e. community belonging, emphasizing meaningful relationships, public opinion understanding, independence, etc.) (Tinker et al. 2013; Van der Voordt 1997) – Figure 15.

Finland has a health care system similar to the UK as well. Historically, the hospital system was introduced and strongly improved in the 1950s, and it had a continuous growth and diversification until the 1980s when social care and health care were incorporated in the same national and financial planning (Vuorenkoski, 2008).
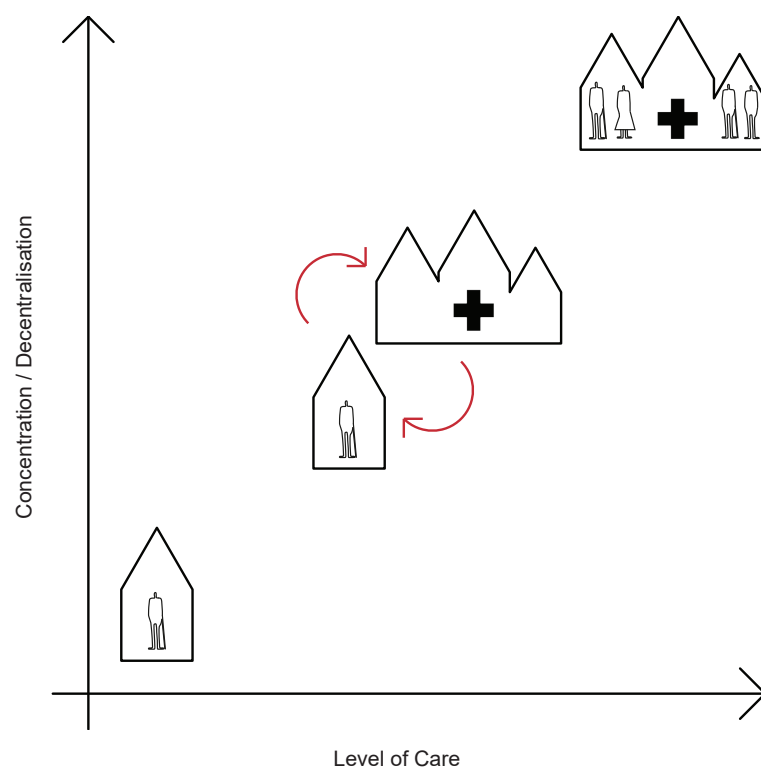
Figure 15. The Dutch Care Strategies. Disposable Care Models and Facilities According to the Concentration or Decentralisation of Older Adults over the level of Provided Care © Davide Landi

This underlined the fundamental importance of a "person centred" approach to the care provision (Leichsenring, 2004). The Insurance Scheme is the National Health Insurance (NHI) (Hakkinen et al., 2008), which was adopted since the 1960s. The main services are provided by the non competitive public sector and cover the majority of the population (Björkgren et al. 2001). They are economically supported by general taxation: municipal taxes, state subsidiaries, and users' charges. For example, the 43% of total health care costs were financed by the municipalities, about 18% by the state, 15% by the National Health Insurance (NHI) and about 24% by private sources (mainly households) in 1999 (Vuorenkoski, 2008; Martikainen et al, 2009).

Hierarchically, the actual structure of the health care system revolves around the 432 Finnish Municipalities, which are responsible for the local services such as health centres (primary care) and specialist health care (Hakkinen et al., 2008). The Parliament, Government and Ministry of Social Affairs and Health, Provincial state office are the legislative organs. The Social Insurance Institution and National Health Insurance support them. This was a consequence of the 1972 Primary Care Act which established a five-year plan annually updated (Vuorenkoski, 2008). Municipalities also provide services for the elderlies such as nursing homes, as well as other social services (i.e. home help services, income support, etc.) also for other social groups (i.e. children) such as family planning (Vuorenkoski, 2008; Hakkinen et al., 2008). The Federation of municipalities offers the majority of specialised services. It manages the "hospital district" which includes university, regional and central hospitals (Hakkinen et al., 2008). Since the 1990s, it has been acquiring an increasing autonomy through 1993 State Subside reform (Kröger and Leinonen, 2012; Vuorenkoski, 2008). In these same years, the Private Health Care Act was adopted in order to regulate the provision of private health care services. In 2001, the Finnish Government started a national plan to guarantee the future and quality of public health care services and their provision, which was partially implemented in 2005. It faces the social and economic

challenges of the contemporary time. For example the access, waiting lists, human resources and heterogeneity of services. Consequently, this required a change in the structure of Municipalities while the State increased its subsidies (Vuorenkoski, 2008; Leichsenring, 2004).

Particular attention should be given to the Long Term Care (Murphy et al., 2006). The 90% of the population accessing long-term care to long-term care services are older adults. The services are provided to inpatient older adults by the homes for the elderly and health centres. The home for the elderly provides care for less needed older adults. Health Centres in hospitals provide care for the sickest. (Björkgren et al. 2001). On the one hand, there are the municipalities, in the majority, together with nongovernmental and private organisations; in the minority, a smaller number, own the homes for the elderly (Kröger and Leinonen, 2012; Vuorenkoski, 2008). On the other hand, health centres collaborate with homes for the elderly. Doctors of the health centres take care of medical treatment once or twice a week for the older adults in the homes for the elderly (Vuorenkoski, 2008). Therefore, these are managed according to the economic resources and the type of social and care service provided (Björkgren et al. 2001). Additionally, the long-term care services include home care services for daily living such as day care centres, day-hospital, home nursing, specialist studies, transportation, and home delivered meals. This supports the family and non-family informal care (it has an annual value of $200 billion) (in which family members do not define themselves as carers) with a team which combines home helpers, and home nurses in order to delayed hospitalisation (Murphy et al., 2006; Leichsenring, 2004; Kröger and Leinonen, 2012; Martikainen et al, 2009; Jonsson et al. 2006). This is a form of "shared care." Besides institutionalised settings, these services are provided long-term accommodation for the older adults such as block service flats, and group living (Jonsson et al. 2006) – Figure 16.

Finland

1960s
National Health Insurance Scheme (NHI)

1972
Primary Care Act

1993
State Subside Reform
Private Health Care Reform

2001
National Health Plan

1950s
Hospitals System

Municipalities and "Hospital Districts"
Health Centres and Specialist Health Centres
such as Nursing Homes, and
Home Help Services

"Hospital Districts" acquired more Autonomy
University Hospitals
Regional Hospitals
Central Hospitals

From Nursing Homes to Houses for the Elderly
Municipalities acquired more autonomy to
provide additional care services such as:
Home Care
Day Hospital
Home Nursing
Home Delivered Meals
Day Care Centres
Transportation

Figure 16. The Finnish Architectural and Care Model Plastic © Davide Landi

However, in more recent years informal caregivers are juggling with multiple responsibilities (work and home), while professional caregivers' visits are more frequent but also shorter, thereby an ethical challenge is present: the quality of service is affected and workers are aware of and this so are dissatisfied with their work condition (Murphy et al., 2006; Leichsenring, 2004; Kröger and Leinonen, 2012). An additional risk is that older adults are more marginalised and do not experience everyday social life. Nevertheless, the economic crisis affected the long-term care provision and the reduction of economic resources determined the reduction of the diversity and number of services (i.e. home help services cut of the 42% between 1988 and 1998) (Kröger and Leinonen, 2012). Recently, new measures have been adopted due to the new demographic structure. The first is the publication of quality guideline for older adults' care. The second is the discussion about the possible adoption of Long Term insurance scheme for covering the cost of elderly care (Vuorenkoski, 2008; Leichsenring, 2004). Nevertheless, the rising number of adults' disabilities such as dementia has required the Finnish government to promote a series of policies targeting the society as a whole. These have aimed to increase awareness, research prevention and create a supportive social context (Ministry of Social Affairs and Health, 2013) – Figure 17.

Whereas this overview on the health care system and models of four different countries such as the United Kingdom, Japan, the Netherlands, and Finland untangles the relationship between governments and policy makers, legislative measures, their impact on social and health care models and related architectural correlates; it also clearly frames the timely significance of this research apparatus. The new demographic structure, and the 2008 economic crash declared a failure of traditional economic models (Mostafavi, 2017) forcing governments to adopt significant changes to the existing social and long-term care systems that are no longer sustainable. For example, new health care insurance schemes guarantee the economic resources, while a wider awareness of a new demographic structure and its challenges inform a
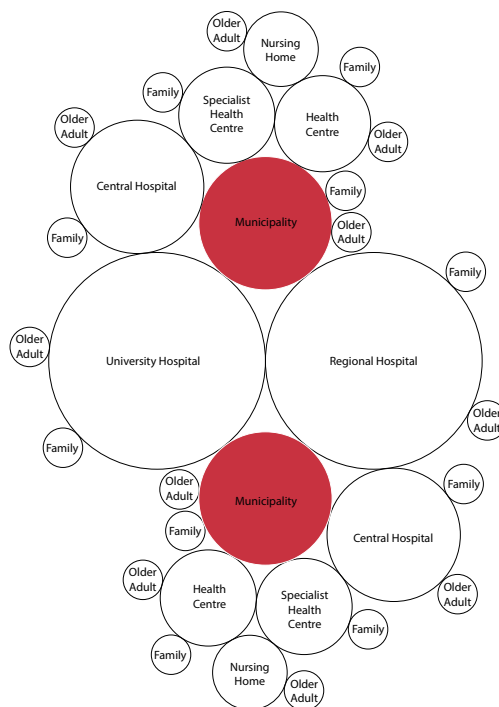
Figure 17. Finnish Care Strate-gies. Disposable Care Facilities at the Urban Level © Davide Landi

major involvement of the society as a whole. Therefore, all the governments are shifting from a more institutional care to a community care mainly through social and qualitative interventions instead of medical ones (Cliftoned, 2011; Peace, 2003). On the one side, older adults become active contributors in working or community environments. On the other side, this increases responsibility to professional and informal care givers such as families (Kröger and Leinonen, 2012). Cultural values and notions represent the key element in the evolution of health and social care models (Muramatsu and Akiyama, 2011). They constitute also a resource for the developing and adoption of sustainable innovative health and social care models. Over time, the separating of different age groups is no longer sustainable (Levy 2017; Ayalon, 2015; Hagestad and Uhlenberg 2005; Townsend 1981; Mumford 1956). For example, the proportion of older adults who live alone has increased in the last 20-30 years in western countries (Martikainen et al, 2009). The conventional institutional living arrangements has built a framework of residential complexes, psychiatric or geriatric facilities and hospitals in which this is emphasised (Townsend, 1981; Loomis et al., 1989). Once again, this confirms the important role of the built environment as being (Leichsenring, 2004) architectural and urban stages that supports a diverse population such as healthy older adults as well as those who have mental and physical impairments, and other age and social groups (Cliftoned, 2011). Therefore, the actual Japanese, Dutch, British, and Finnish social and health care models and their institutional and domestic architectural correlates have shown their character of unfeasibility and unsustainability (Henke et al. 2009; Hashimoto 1996; WHO, and Ministry of Health Labour and Welfare 2012; Williamson, and Higo 2007). Considering socio-economic and political challenges, we should now pay attention to older adults' expectations from the ageing process. Once again, this clearly confirms the central role of the built environment.

Ageing In Place: Ageing In Homes, In Villages, In Towns And In Cities

By 2050, more than 70% of the world's population is expected to live in urban settlements (Arup, 2015; University of Toronto, 2013). Some of them such as London, Tokyo, Helsinki continue to grow, while the population who live in medium and small size urban settings is decreasing in most of the OECD countries. However, the number of older adults who reside in them is increasing in both settings (OECD, 2015, b; Dobriansky et al., 2007). The European Union defined this process as "Shrinking cities" (European Union, 2016). In particular, the older population in metropolitan areas was 12% of the total population in 2001. It increased to 13.9% in 2011. Inevitably, this phenomenon affects urban settlements on a smaller scale such as town and villages. In fact, the growth ratio of older people in suburban areas is estimated at 28.3 % (OECD, 2015, b). On the one hand, metropolitan areas present a more rapid ageing pace (Dobriansky et al., 2007). On the other hand, the suburban areas still have the highest percentage of older adults (OECD, 2015). Additionally, the ageing process in metropolitan areas is not geographically distributed uniformly. The peripheries have the higher concentration of older adults while city centres have a younger population (OECD, 2015, b). Consequently, one of the challenges is represented by the accessibility to basic services such as public transportation, healthcare centres, etc. (European Union, 2016).

Japan is a striking example. The Japanese population raised rapidly during the 20th century, by tripling its number. In 2010, the population peaked at just over 128 million before starting a rapid and increasing steep decline. The government expects a decrease of the 23 -24% by 2050, ¼ of the current level (Ohno, 2017; OECD, 2016). This will have unequivocal spatial implications. In fact, the Ministry of Land and Infrastructure projects that 19% of the built environment will become uninhabited. By 2050, 60% of the inhabited grid squares will lose more than a half their population. The number of

empty houses will increase, entire villages and maybe cities will disappear (Ohno, 2017; OECD, 2016). On the other hand, the big metropolitan areas are expected to have 2% of population growth (OECD, 2016).

Taking into consideration the new demographic structure, a different ageing process in which the percentage of people living with long-term conditions such as dementia is increasing, alternate household and family structures which negatively affect informal caregiving, national health care systems and thereby economies, how can a liveable architecture and city be identified?

In a 2013 report, the University of Toronto defined a "liveable environment" as a context, which promotes health participation and security. This improves the quality of life of its inhabitants. Therefore, a "liveable environment" must satisfy specific requirements such as the availability of physical, economic, health and social infrastructures and services. In an ageing society, a "liveable environment" must also provide easy access to them (MetLife, 2013). This allows different age groups to age in place despite potential changes that may occur in a person's life span. Inhabitants, therefore, preserve a sense of attachment, familiarity and identity within a place. "Ageing in place" has been largely employed by policy makers in order to promote new design standards and urban strategies that has limited the early hospitalisation of older adults (MetLife, 2013). It has supported research on aged people and dementia friendly environments both at the architectural and urban scales. Over time, It has focused on users' independence, safety (both older adults and professional caregivers) and sensory stimulation, and thereby their assessment (i.e. Dementia Design Audit Tool) (Dementia services Development Centre, 2009).

In 2001, Hanson suggested a holistic approach, which the author called "macro approach." In particular, the author argued the necessity of an approach in which

accessibility and independence are a right for everyone. For example, multigeneratio-nal planning and inhabiting is one of the suggested strategies, because the limitation of exclusive housing options to specific age groups, such as older adults, benefit from living in high density of mixed used communities. They contain health care services, support services for both older adults, professional and informal caregivers. The presence of a network of public transportation services and community services allows inhabitants to safely experience the surrounding areas while remain civically and socially engaged. Additionally, the walkability in these strategies is synonymous not only with accessibility but also of wellbeing (Hodgson, 2011; Burstow, 2014; Garwood, 2013; Breton, 2013; Breton, 2008; OECD; 2012) (e.g. Local Community Area Project by Riken Yamamoto – See Appendix) (Yamamoto, 2014; Yamamoto, 2012; Yamamoto, 2011). These urban strategies may reverse some of the segregation patterns (i.e. zoning) by providing different services and users. However, the challenges persist when the mental and physical condition of older adults deteriorate (Hodgson, 2011; Burstow, 2014; Garwood, 2013; Breton, 2013; Breton, 2008).The research on aged people and dementia friendly environments at the architectural scale has converged on communal aspects. For example, visually/physically uninterrupted and short corridors (i.e. loop corridors), the use of wayfinding, colours, simplicity, and generous standards help older adults' navigation (Blackman et al, 2003; Best and Porteus, 2012; Iwarsonn and Stahl, 2003; Croinin-Golomb, 2014; Healthcare Design and Management, 2014). Simultaneously, the lighting and acoustic systems and, the outdoor environments contribute to reducing distress and distraction (Brawley, 2001; Delhanty, 2013; Day et al. 2000; Highnett et al. 2016; Lawton et al, 1984; Sloane et al, 1998; Barnes, 2002). Consequently, the unit size, familiarity and informality as well as the proximity to other relevant areas or people (i.e. shop, pharmacy, etc.) are central in older adults' experience (Chaudhury and Cook, 2014; Chenoweth et al, 2014; Ferdous and Moore, 2015; Best, 2012; McCracken and Fitzwater, 1989). Together with the use of simple daily technologies and the possibility of customisation/adaptation of their own home,

these generate physical, emotional and psychological benefits (Blight and Kerslake, 2011; Brorsson et al. 2011; Regnier, 1997; Davies, 2014; Department of Health, 2012; Davis et al, 2009; Smith, 2016; Handler, 2014).

The built environment not only has direct physical, emotional and psychological repercussions on older adults, but also affects positively or negatively on the provision of care, and professional caregivers (Hoglund, and Ledewitz, 1999; Halsall and Macdonald, 2015, a, b). A particular example in this area is again Japan in which the Government's actions have mainly targeted the medical aspect of ageing and dementia (Kose, 2013). This country, however, has combined guidelines from western countries such as USA with cultural notions and differences, rather than peculiarities. In particular, Japan adopted the "Accessible and Usable Built Environment Law" since 1995 (Kose Interview, 2017). It is similar to the Accessible Guidelines based on ADA in the USA (but with some obligatory measures). The law is underpinned by following concepts: "safety, accessibility, usability, affordability, sustainability and aesthetics." They attempt to generate an environment, which can be experienced by anyone in order to tackle the risk of social and age segmentation (Kose, 2001, a).

Besides the influence of international policies such as the "1990 American Disabilities Act," or the "1983 -1992 International Decade of a Disabled Person," the first Japanese accessibility regulation was introduced in the 1950s: the "Japanese Building Standard Law." It did not have any substantial revision until the 1990s in which the law became obsolete due to a completely different socio-economic context (Kose, 2001, b). However, innovative initiatives were promoted in some Japanese prefectures. For example, in the 1970's a pioneering housing programme allowed single senior citizens, who could not access public housing until the 1980s "Public Housing Act" to live in units with a minimum area of 22.9 sqm (Kose, 1988). These units were later identified as housing prototypes which were called 51c (Sand, 2013).

Nevertheless, substantial changes were adopted in the 1990s. The 1995 "Accessible and Usable Built Environment Law" was the first law that took into consideration the changing Japanese demographic structure. In fact, It followed the publication of the Japanese demographic prevision report by the Ministry of Construction and the Buildings Research Institute (Kose, 2001, c). The report proposed some guidelines such as larger residential units promotion of housing for older adults with disabilities and implementation of design principles able to compensate the decreasing abilities of an old person, etc. Therefore, these guidelines together with some additional social policies led to the publication of more comprehensive programmes such the "Silver Housing Project." It, for instance, targeted older adults who were physically and socially independent (Kose and Nakaohji, 1991; Kose, 1998, a). Additionally, the programme defined three different older adult groups according to their capabilities: independent; partially dependent; and dependent. These diverse categories were associated with different basic requirements. Respectively, the people who were independent must be able to access the public environment and public transport safely (easy vertical movements, and placed at walking distance), and experience comfortable and functional dwellings. The people who were partially dependent must live in dwelling easy to safely evacuate in case of necessity. The people who were physically dependent must live in dwellings in which residential care and assistance are provided (Kose, 2001, a; Kose, 2013). Examples of some of the basic ensured requirements were:

_ Room layout. It follows the structure of the household living in there. However, it should be planned in order to avoid inconvenience to all its inhabitants. Good circulation patterns are fundamentals. An additional exit to the possible garden directly from older adults' room should be considered.

_ Entrance and Exit: types of door and sill should be designed in order to promote safety and ease of use. Additionally, older adults often use different wheelchairs for

indoors and outdoors.

_ Corridor and circulation. The minimum width is 80 cm.

_ Stairs. They should be given handrails with a wide step and lower rise.

_ Floor treatment. Avoid small changes in level. Floor material should be chosen to reduce tripping, slipping, and soften an impact of a fall.

_ Sanitary Facility. The bathroom does not have differences in level between the dry and wet zone, the inclusion of handrails, larger bathtubs and toilet heating. Corners and fixtures should be safe and easy to use.

_ Kitchen. The risk of burns should be minimised by promoting the use of electrical tools. The height of the kitchen cabinets and workspace should be carefully designed for different users to access.

_ Recreational space. Social relationships are important for older people so they must be able to invite friends without disturbing the other residents. Older adults' areas should be properly acoustically insulated.

_ Easy to adapt. Older adults' dwellings should be easy to adapt according to their evolving condition.

_ Easy to maintain. Daily maintenance is simple and economical (i.e. cleaning, etc.).

_Use of Technology. Technology helps in the monitoring and simplifing the older adults' life (Kose, 2009; Kose, 2001, c; Kose, 2006; Kose, 2013).

These guidelines not only informed the adaptation of existing buildings, although they generated new types of accommodation such as the "Pair Units." In particular, they presented a living unit for seniors on the ground floor with a small kitchen, whilst the living unit for their grown up children was placed on the first floor. Both units had independent entrances, although toilets and bathrooms were shared. Additionally, the single older adults' unit counted 35 sqm (two rooms and a kitchen), the older adults couples' unit was of 48 sqm (two rooms, a dining room and a kitchen). They were accessible through an elevator (Kose, 2001, d; Kose, 1991).

The urban environment has been also at the centre of the discourse surrounding ageing and dementia friendly standards. First, the public transportation. the "Public Transportation Law" in 2000 guaranteed the public transportation accessibility to all the citizens. Second, the access to public buildings. In 2002, the Japanese Government reviewed the "Accessible and Usable Built Environment Law." Consequently, the access to public buildings such as schools and offices became mandatory, while not for other types of buildings. Additionally, the government introduced economic benefits for private developers who followed this new detailed building regulation (Kose, 2001, a; Kose 2009). Third, the site. It must be selected according to older adults' lifestyles, in mixed neighbourhoods. This maximises social integration and improves proximity to health/day-care centres or nursing homes (Kose, 1991). In 2001 and later previsioned in 2011, the "Securing Housing Senior Law" attempted to increment the availability of non-institutional accommodation for older adults (Kose, 2013). This could be possible also through the LTCI, which economically supported older adults who wanted to adapt their own dwellings. They could request up to £1,500. This is the real challenge (Kose, 2001, a). Since 2002, the Japanese Government adopted a certification system for senior residences. However, it was unsuccessful due to the low cost/benefit ratio, and the risk of lowering the market value of the available properties (Kose, 2006; Kose, 2009).

Furthermore, since the adoption of certain policies, research has increased in recent years the awareness towards dementia. However, dementia – friendly design principles are not adopted in Japan, although original design considerations are available. They mainly focus on wayfinding (Kose Interview, 2017). For example, a care home in Setagaya has adopted some of the design principles developed by the University of Stirling (UK). In fact, it presents red handrails on doors that contrast with crea-med-coloured walls. Additionally, bathrooms and toilets are visible from sitting or lying positions. The furniture of toilets has strong contrast in colours and carpets on the entrance doors features similar colour with the floor tiling (Otake, 2017). Consequently, design is not limited to physical environments, although to design suggests the use of them, both indoor and outdoor. This reveals a particular relationship with a place and occupants' background (Satoshi, 2012). The Japanese design considerations foster the familiarity, legibility, accessibility, security, and a strong presence of nature in urban and architectural environments (Inoue, 2017). Nevertheless, universal design is the starting point for a more important mind-set shift (Kose, 2013).

In this regard, a recent study by The Royal College of Art – the Helen Hamlyn Centre for Design (2016) in collaboration with The British Standards Institution (BSI) investigated a collection of ideas for the build environment, which are centred around the need of neurologically diverse people. This will inform the BIS future national design guidelines. The challenges of this study was the broad spectrum of necessities, which are linked to neurologically diverse people. Therefore, the study engaged in a full and active involvement of representatives from different groups of neurologically diverse people. Additionally, this focused on the impact and evaluation of these guidelines for users as well as professionals who will apply them. The outcomes of this study were based on eleven research design themes: Lighting, Familiarity, Preview, Safety, Signage, Decoration, Clarity, Acoustics, Flooring, Layout and Sensory Stimulation. These will be also the themes of the guidelines. However, diverse view exists around certain design

features and thereby not one size fits all. Consequently, these themes do not aim to be prescriptive, although they intend to create a platform of considerations to support and inform (The Royal College of Art – the Helen Hamlyn Centre for Design, 2016). Standards have and will have their use; it would be impossible to plan, or design something without them (Turner, 1972). The promotion of design guidelines is evidence based in order to optimize the effectiveness and the economy of the proposed solution is and will be fundamental (Toronto University, 2013). However, they cannot enhance inhabitants' experience, and thereby use of the built environment (Turner 1972; Walker 2011). In a certain sense, the system should be reinvented by emphasising less physical aspects that define a place (Relph, 1976) such as a sense of belonging, participation, informal and meaningful relationship, which fosters older adults' social inclusion. Consequently, the notion of "ageing in place" embodies an extended meaning not anymore limited to standards.

Several longitudinal studies confirm that the majority of people aim to "age in place." For people, the term "place" identifies the site where a person has been spending most of their time (Provencher, 2014; Costa-Font et al, 2009). Beside a geographical identification (Chui, 2008), people attach to a place a sentimental values and memories (Rojo Perez et al., 2001; Wiles et al. 2011). This is often translated into "meaningful" places. The place in which the ageing process happens acquires a "sense-of-place." This term embodies multiple meanings such as place identity, a sense of purpose, belonging and thereby having a meaningful existence (Fang et al. 2016). They are "temporary permanence" that provides a different understanding of space. It, therefore, is not any more limited to the territories or boundaries while it embeds evolving social practice (Harvey, 1996, pp. 241). Time, thereby, becomes an important aspect in place making. On the one hand, authors such as Massey (2005) and Schutz (1972) underline the ephemerality and changes peculiar to place making. In particular, Schutz (1972) emphasises the importance of spontaneity in place making beyond the time; while

Massey (2005, pp.141) emphasises how a space is selected among several generic alternatives by its inhabitants who attribute to it a specific configuration with purpose and meanings – "temporary constellation." Therefore, the constellation identifies a process rather than a thing. These meanings and purposes change according to different perspectives. On the other hand, Harvey (1996) underlines the durability through time of places. However, in both cases the meaningfulness of relationship and spaces is subject to people who experience them. This helps the inhabitants to gain localised, insider status (Fang et al. 2016; Pierce et al. 2010).

Ageing in place benefits a person's self-esteem, personal health, and it sustains good physical and mental health (Sixsmith and Sixsmith, 2008; Peace et al., 2011; MetLife, 2013). The social participation is thereby improved (Sixsmith and Sixsmith, 2008). Nevertheless, not only the supportive social environment but also the built environment has a central role in this (Fang et al. 2016). First, the ageing process reduces the mental and the physical capability of a person, and thereby the built environment becomes an unconscious and tangible barrier (Sixsmith and Sixsmith, 2008; Peace et al., 2011; Provencher, 2014; Rojo Perez et al. 2001). Second, a poor built environment is detrimental on older adults' physical and mental health (Sixsmith and Sixsmith, 2008; Peace et al., 2011). As a consequence, the avoidance and restriction patterns are emphasised in a poor built environment (Sixsmith and Sixsmith, 2008). The advent of new technologies may help the older adults' care provision and independence (Van Hoof et al., 2011), although it is not a substitute of certain social values and benefits that only a proper designed environment can generate. These social values are underpinned by reciprocal support and interdependences between different age and social groups (Peace et al., 2011; Massey; 2005). It may be found in the notion of community as a dispenser of these social values that may fulfil older adults' differentiated needs and expectations (Provencher, 2014). A new way of sharing responsibilities and defined by Feddersen and Ludtke (2014) as "caring communities" (WHO, 2012; Kang 2012).

Consequently, the notion of "age in place" reveals a connection between the built environment and a responsible contribution of its inhabitants in the care provision (Chui, 2008). It is line with a World Health Organisation (WHO) report published in 2012. The WHO emphasised the need for collaboration between different categories of care providers and professionals to address the challenges dementia can present at a personal and societal level (WHO, 2012; Kang 2012). Additionally, inhabitants and particularly older adults are marginal in planning and building processes. The responsible contribution concerns also the making of a "meaningful" physical space and a social space are, thereby, strongly bound (Fang et al. 2016).

Nevertheless, the institutionalisation of older adults is still the most common of solutions (Sixsmith and Sixsmith, 2008;Chui, 2008). Even if European and non-European governments have explored alternate housing initiatives (Means, 2008), regional/ national and international migration phenomena have generated the displacement of a big number of older adults who look for the best-institutionalised settings. They are more marked in certain specific geographical areas such as North European countries. For example, people who are originally from countries such as Great Britain, Republic of Ireland, and Denmark move respectively in countries such as Spain. They find in these locations more affordable cost of life and better climate (Oliver, 2007). Retirement villages such as Costa del Sol in Spain may be interpreted as "utopian environments." The media and information system such as local television, newspapers, etc., for instance, are filtered. There, older adults have access to a lifestyle package that built a replacement in spatial, temporal and relational replacement with the origins (Simpson, 2015). On the one hand, this is synonymous of a certain flexibility, adaptability and mobility that is not very common between older adults. On the other hand, it emphasises segregation patterns. In fact, these villages are communities of international older adults in which the only expression of social life is represented by expatriates' clubs while spending time with locals. They are micro-cosms, which are placed in a national

context while disconnected from it. In the book *Retirement Migration: Paradoxes of Ageing,* the author wrote (Oliver, 2007, p. 152) *"Many retired migrants in Spain do little to change their ways of life in the new context particularly as they are supported by a thriving infrastructure catering to their needs."* Besides the number of older adults, their economic resources move abroad instead of being reinvested in the communities of origins (Oliver, 2007). Additionally, they age in a different country from the one of their origin. Inevitably, this affects their diversity and cohesion of a community as well as the delivery of health and care services (European Union, 2016; Cliftoned, 2011; European Union, 2013). Consequently, the built environment does not only foster independence, safety and early diagnosis in order to postpone hospitalisation of older adults, but the built environment becomes a meaningful place that supports also professional and informal care providers such as families and professional caregivers (Burke et al., 2015).

Historically, cities have been a collage of a diverse population and economies, which have had a direct influence on their diversity, uniqueness and quality (Fielding, 2014; Rossi, 1982). The described social metabolism (i.e. a new demographic structure, shrinking household structure and built environment, adoption of certain policies, etc.) inevitably may affect the richness of cities if they are still grounded on past urban and architectural strategies. The risk is the social segregation and possible expulsion of specific age groups, the older adults with early stages of dementia - the 'third age of tomorrow.' Fundamental is to establish a new balance with in this social metabolism through the adoption of innovative policies, economic models, etc. They should target the society as a whole and the older adults, in particular, must be active socio-economic contributors (European Union, 2016; OEDC, 2015). In this scenario, questioning the conventional building environment through the creation of new multi-disciplinary and collaborative synergies is determinant (University of Toronto, 2013; Borasi and Zardini; 2012). On the one hand, this has implications of the design and

caregiving professions in terms of ethical responsibilities. On the other hand, it reveals the urgency of promoting participation and diversity in terms of inhabitants and built environment by opening up functionalist and specialized settings which were inherited from architectural and urban strategies of the 19th and 20th century (Gleeson, 2001; Blackman et al., 2003; Provencher, 2014).

A speculative example is the project "MadLove." It was the outcome of the collaborative process between architects and the artist underpinned by the artist's personal experience in modern/functionalist mental health services. The project proposes a new landscape for mental care facilities where future service users can safely 'go mad' (Project Office, 2016). This informs a new thinking, making so living of urbanism and architecture that is able to generate a new notion "types/typologies" (Rossi, 1982). The in depth comprehension of the contemporary social metabolism and culture is translated in types and their new notion. They may embody architectural, urban "spatial structures," which echo historical, social one (Landi, 2017), although they proposes an alternate economic and social order from the functional, modern, and capitalist one. This will produce an economic and social growth (WHO, 2012; Sennett, 2004). In order to that, the thesis must first prose a critique to modernist and post-modernist urban and architectural strategies in the following chapter. Even if they were introduced with the Fordism economic model, these strategies have continued to prevail and thereby to shape the built environment until nowadays. The critique presents then the notion of typology and types (Rossi, 1982; Moneo, 2010; Picon, 1988, Akcan, 2018) as it has adopted by historians of architecture, architects and sociologists. The remaining part of the background proceeds by presenting an alternate urban paradigms: the "open city" (Jacobs, 1961; GSD, 2016; GSD, 2017; Sennett, 2018; Burdett, R., and Sudjic, 2008; Sennett, 2006) while revealing the lack of open systems at the architectural scale. This leads to the introduction of the "open type" notion.

REFERENCE LIST

Akcan, E. (2018) *Open Architecture: Migration, Citizenship, and the Urban Renewal of Berlin-Kreuzberg by IBA-1984/87.* Basel: Birkhauser GmbH.

Alzheimer Disease International (2015, a) *Dementia Friendly Community, Key Principles.* London: Alzheimer Disease International.

Alzheimer Disease International (2015, b) *Dementia Friendly Community: Global Perspective.* London: Alzheimer Disease International.

Alzheimer Europe (2013) *Prevalence of Dementia in Europe - the Netherlands* [on-line] Available at: http://www.alzheimer-europe.org/Policy-in-Practice2/Country-compa-risons/2013-The-prevalence-of-dementia-in-Europe/Netherlands [Accessed: 15th December 2017].

Alzheimer Society (2017) *Dementia Care in Japan – Independence and Choice* [online], 14th February 2017. Available at: https://blog.alzheimers.org.uk/personal-sto-ries/dementia-care-japan-independence-choice/ [Accessed: 17th July 2017].

Anonymous (1993) Called Critical time in Society's Rapid Ageing. *The Japan Times* [on-line] 1st March 1993. [Accessed: 17th July 2017].

Arai, Y., Arai, A., Mizuno, Y. (2010) The National Dementia Strategy In Japan. *International Journal Geriatric Psychiatry* [online] 25 (9) pp. 896-899 DOI: 10.1002/gps.2589 [Accessed: 20th July 2017].

Armstrong, W. A. (1972) A Note Of The Household Structure Of Mid Nineteenth Century

York In A Comparative Perspective. In: Laslett, P. (ed.) *Household and Family in Past Times.* Cambridge: Cambridge University Press, pp. 205-214

Arup. (2015) *Shaping Ageing Cities.* London: Arup.

Atchley, R. C. (1989) A Continuity Theory Of Normal Ageing. *The Gerontologist* [online] 29 pp. 183-190. Available at: http://gerontologist.oxfordjournals.org/ [Accessed: 15th December 2016].

Auchenbaum, W.A. (1995) *Crossing Frontiers: Gerontology Emerges As A Science.* Cambridge: Cambridge University press.

Ayalon, Liat (2015) Perception of Old Age and Ageing in the Continuing Care Retirement Community." *International Psychogeriatric* [online] 27 (4), pp. 611-620. DOI: https://doi.org/10.1017/S1041610214002415 [Accessed: 15th December 2016].

Ball, B. and Chambard, E. (1882) Demence. In: Dechambre, A. (ed.) *Dictionary Encyclopedique de la science Medicale,* vol. 26. Paris: Asselin pp. 559-605.

Banerjee, S. (2010) Living Well with Dementia – Development of the National dementia Strategy for England. *International Journal of Geriatric Psychiatry* [online] 25 pp. 917-922. DOI: https://doi.org/10.1002/gps.2598 [Accessed: 15th May 2019].

Barnes, S. (2002) The Design Of Caring Environments And The Quality Of Life Of Older People. *Ageing & Society* [online] 22 pp. 775-789. DOI: 10.1017/S0144686X02008899. [Accessed: 8th September 2016].

Berrios, G. (1990) Memory and The Cognitive Paradigm Of Dementia During The

19th-Century: A Conceptual History. In: Stevenson, C. (ed.) *Lectures on the History of Psychiatry: the Squibb Series.* London: Gaskell, pp. 194-211.

Bestor, T. C. (1985) Tradition and Japanese Social Organization: Institutional Development in Tokyo Neighbourhood. *Ethnology* [on-line] 24 pp. 121-135. DOI: http://www.jstor.org/stable/3773554 [Accessed: 17th November 2016].

Best, R., and Porteus, J. (2012) *Housing our Ageing Population: Plan for Implementation.* London: All Party Parliamentary Group on Housing and Care For Older People.

Björkgren, M.A., Häkkinen, U. & Linna, M. (2001) Measuring Efficiency of Long-Term Care Units in Finland. *Health Care Management Science* [online] 4, pp. 193-200. DOI: https://doi.org/10.1023/A:1011444815466 [Accessed: 12th April 2018].

Blackman, T., Mitchell, L., Burton, E., Jenks, M., Parsons, M., Raman, S. and Williams, K. (2003) The Accessibility of Public Spaces for People with Dementia: A New Priority for the 'Open City.' *Disability & Society* [online] 18 (3). DOI: http://dx.doi.org/10.1080/0968759032000052914. [Accessed: 17th July 2017].

Blight, J., and Kerslake, A. (2011) *Strategic Housing for Older People. Planning, Designing and Delivering Housing that Older People Want.* London: Housing LIN.

Blunt, A. (2005) Cultural Geography: Cultural Geographies of Home. *Progress in Human Geography* [online] 29(4), pp. 505-515. DOI: 10.1191/0309132505ph564pr. [Accessed: 12th April 2018].

Bognar, B. (2008) *Beyond the Bubble: The New Japanese Architecture.* London: Phaidon.

Boller, F., and Forbes, M.M. (1998) History Of Dementia And Dementia In History: An Overview. *Journal of the Neurological Sciences* [on-line] 158, pp. 125-133. DOI: http://dx.doi.org/10.1016/S0022-510X(98)00128-2. [Accessed: 16th November 2016].

Borasi, G., and Zardini, M. (eds.) (2012) *Imperfect Health: the Medicalisation of Architecture.* Zurich: Lars Muller Publishers.

Brawley, E. C. (2001) Environmental Design for Alzheimer's Disease: A Quality Of Life Issue. *Aging & Mental Health* [online] 5 pp. 78-83. DOI: 10.1080/13607860120044846. [Accessed: 5th May 2017].

Breton, M. (2008) *The Cohousing Approach To 'Lifetime Neighbourhoods'.* London: Housing LIN.

Breton, M. (2013) *Senior Co-Housing – An Alternative Approach For The UK?* Joseph Rowntree Foundation [on-line] Available at: https://www.jrf.org.uk/report/senior-cohousing-communities-%E2%80%93-alternative-approach-uk [Accessed: 7th December 2017].

Brorsson A. et al. (2011), Accessibility in Public Spaces As Perceived By People With Alzheimer's Disease. *Dementia* [online] 10(4) pp. 587-602. DOI: 10.1177/1471301211415314 [Accessed: 27th January 2017].

Brown Wilson, K. (2007) Historical Evolution of Assisted Living in the United States, 1979 to the Present. *The Gerontologist* [online] 47, pp. 8-22. DOI: 10.1093/geront/47. Supplement_1.8 [Accessed: 1st December 2016].

Budson, A. E., and Kowall, N. W. (2014) *The Handbook Of Alzheimer's Disease And*

Other Dementias. Oxford: Wiley.

Burdett, R., and Sudjic, D. (2008) *The Endless City.* London: Phaidon.

Burke, R.J., Cooper, C. and Antoniou, A.-S. G. (eds.) (2015) *The Multi-generational and Aging Workforce.* Cheltenham: Edward Elgar.

Burstow, P. (2014) *A Vision For Care Fit For The Twenty First Century.* London: The Commission of Residential Care.

Busse, R., van Ginneken, E., Schreyogg, J., Wisbaum, W. (eds.) (2004) *Health Care in Transition.* Brussel: European Observatory on Health System and Policies.

Cerniauskaite, M., Quintas R., Boldt, C., Raggi, A., Cieza, A., Bickenbach, J., E., Leonardi, M., 2011. Systematic Literature Review on ICF from 2001 to 2009: Its Use, Implementation and Operationalisation. *Disability and Rehabilitation* [online] 33(4), pp. 281–309. DOI: 10.3109/09638288.2010.529235. [Accessed: 16th November 2016].

Charpentier, T. (1885) Des Troubles Menatux Dans La Senilite Precoce Et Rapide. *Annales Medico – Psycologique,* 43, pp. 276-296.

Chaudhury, H., and Cook, H. (2014) Design Matter In Dementia Care: The Role Of The Physical Environment In Dementia Care Settings. In: Downs, M. and B. Bowers, B. (eds.) *Excellence in Dementia Care,* 2nd Edition. London: Open University Press, pp. 144-158.

Chenoweth, L., Ian Forbes, I., Fleming, R., King, M. T., Stein-Parbury, J., Luscombe, G., Kenny, P., Jeon, Y., Haas, M., and Brodaty, H. (2014) PerCEN: A cluster randomized

controlled trial of person centered residential care and environment for people with dementia. Wollongong: International Psychogeriatric. *International Psychogeriatrics* [online], 26 (1), pp. 1147-1160. Doi: https://doi.org/10.1017/S1041610214000398. [Accessed: 6th September 2016].

Chui, E. (2008) Ageing in Place in Hong Kong-Challenges and Opportunities in a Capitalist Chinese City. *Ageing Int.* [online] 32, pp.167-182. DOI: 10.1007/s12126-008-9015-2 [Accessed: 11th November 2016].

Claudel, M., and Ratti, C. (2016) *The City of Tomorrow: Sensors, Networks, Hackers, and the Future of Urban Life (The Future Series).* New Haven (CT): Yale University Press.

Clemerson, G., Walsh, S. and Isaac, C. (2014) Towards Living Well with Young Onset Dementia: An Exploration of Coping from the perspective of those Diagnosed. *Dementia* [online] 13 (4), pp. 451-466. DOI: https://doi.org/10.1177/1471301212474149 [Accessed: 15th May 2019].

Cliftoned, J. (ed.) (2011) *Older Londoners.* London: IPPR.

Clouston, T. S. (1888) Presidential Address. *Journal of Medical Science* 34, pp. 325-348.

Collins, R. (2015) Keeping It in the Family? Re-Focusing Household Sustainability. *Geoforum* [online] 60, pp. 22-32. DOI: https://doi.org/10.1016/j.geoforum.2015.01.006 [Accessed: 16th June 2018].

Costa-Font, J., Elvira, D. and Mascarilla-Miró, O. (2009) 'Ageing in Place'? Exploring

Elderly People's Housing Preferences in Spain. *Urban Studies* [online] 42(2), pp. 295-316. DOI: 10.1177/0042098008099356. [Accessed: 11th November 2016].

Cox, R. (2013) House/Work: Home as a Space of Work and Consumption. *Geography Compass* [online] 7(12), pp. 821–831. DOI: 10.1111/gec3.12089. [Accessed: 16th June 2018].

Croinin-Golomb, A. (2014) Visuospatial Function an Alzheimer's Disease and Related Disorder. In: Budson, A. E. and Kowall, N. W. (eds.) *The Handbook of Alzheimer's Disease and Other Dementias.* London: Blackwell Publishing Ltd.

Dagonet, H. (1876) *Nouveau Traite Elementaire Et Pratique Des Maladies Mentales: Suivi De Considerations Pratiques Sur L'administration Des Asiles D'alienes.* Paris: Balliere.

Davies, B. (ed.) (2014) *For Future Living, Innovative Approaches to Joining Up Housing And Health.* Manchester: IPPR North.

Davis S., Byers, S., Nay, R., Koch S. (2009) Guiding Design Of Dementia Friendly Environments In Residential Care Setting: Considering The Living Experiences. *Dementia* [online] 6 (2) pp. 185-205. DOI: 10.117/1471301209103250. [Accessed: 8th June 2017].

Day, K., Daisy, C. and Stump, C. (2000) The Therapeutic Design of Environments for People With Dementia: A Review of the Empirical Research. *The Gerontologist,* 40, (4) [online] pp. 397-416. DOI: https://doi.org/10.1093/geront/40.4.397. [Accessed: 8th June 2016].

Dementia Services Development Centre (2009) *Dementia Design Audit Tool.* Stirling: University of Stirling.

Delhanty, T. (2013) *Landscape Design for Dementia Care.* London: Housing LIN, Factsheet 35.

Department of Health (2012) *Living Well With Dementia.* London: Design Council.

Dobriansky P.J., Hodes R.J., and Richard, S.M. (eds.) (2007) *Why Population Aging Matters. A Global Perspective.* Washington (DC): National Institute On Aging. National Institutes of Health.

Dowling, R. and Power, E. (2012) Sizing Home, Doing Family in Sydney, Australia. *Housing Studies* [online] 27 (5), pp. 605-619. DOI: https://doi.org/10.1080/02673037 .2012.697552. [Accessed: 16th June 2018].

Downs, M. (2013) Embodiment: the Implication for living Well with Dementia. *Dementia* [online] 12 (3), pp. 368-374. DOI: https://doi.org/10.1177/1471301213487465 [Accessed: 15th May 2019].

Easthope, H., Liu, E., Bruce J., and Burnley, I. (2015) Feeling at Home in a Multigenerational Household: The Importance of Control. *Housing, Theory and Society* [online] 32(2), pp. 151-170. DOI: 10.1080/14036096.2015.1031275 [Accessed: 16th June 2018].

Egdom, Van, G. (1997) Housing for the Elderly in The Netherlands: A Care Problem. *Ageing International* [online] 23 (3) pp. 165-182. Doi: https://doi.org/10.1007/s12126-997-1012-3. [Accessed: 16th June 2018].

Elliot, A.; Masataka, K. and Sawai, A. (eds.) (2013) *Japanese Social Theory. From Individualization to Globalization.* London: Routledge.

Esquirol, J. E. (1838) *Des Maladies Mentales.* Paris: Bailliere.

European Union (ed.) (2013) *The ESPON 2013 Programme. Demographic and Migratory Flows Affecting European Regions And Cities.* Brussels: European Union.

European Union (ed.) (2015, a) *The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies.* Brussels: European Commission.

European Union (ed.) (2015, b) *The 2015 Ageing Report. Economic and Budgetary Projections for the 27 EU Member States (2010-2060).* Brussels: European Commission.

European Union (ed.) (2016) *The Impact Of Demographic Change On European Regions.* Brussels: European Committee of Regions.

Fang, M. L., Woolrych, R., Sixsmith, J., Canham, S., Battersby, L., Sixsmith, A. (2016) Place-Making with Older Persons: Establishing Sense-Of-Place through Participatory Community Mapping Workshops. *Social Science & Medicine* [online] 168, pp. 223-229. DOI: https://doi.org/10.1016/j.socscimed.2016.07.007 [Accessed: 10th November 2017].

Feddersen, E., and Ludtke. I., (eds.) (2014) *Lost in Space: Architecture and Dementia.* Basel: Birkhauser GmbH.

Ferdous, F. and Moore, K. D. (2015) Field Observations into the Environmental

Soul: Spatial Configuration and Social Life for People Experiencing Dementia. *American Journal of Alzheimer's Disease & Other Dementias* 30 pp. 209-218. DOI: 10.1177/1533317514545378.

Fielding, T. (2014) *Population Mobility and Regional Development.* Brighton: Sussex Centre of Migration Research.

Fleming, P., Saïller, P., Marino, L., Klapper, B., Staëhle.B., Rauws, G., Sakali, S., Villez, M., McGuire, M., John Kennedy, J., Hare, P., Buchanan, A., and Morrison, E. (eds.) (2016) *Mapping Dementia-Friendly Communities Across Europe.* Brussels: The European Foundation's Initiative On Dementia (EIFD).

Foot, J. (2015) *The Man Who Closed The Asylums: Franco Basaglia And The Revolution In Mental Health Care.* New York (NY): Verso.

Freeman, K. J. (1926) *The Work And Life Of Solon.* London: London University press.

Fukutake, T. (1989) *The Japanese Society.* Tokyo: University of Tokyo Press.

Gard, R. E. (1992) *Beyond The Line.* Madison (WI): Prairie Oak Press.

Garwood, S. (2013) *Older People With High Support Needs In Housing With Care.* York: Joseph Rowntree Foundation.

Gaudion, K., and McGinley, C. (2016) *Design For The Mind: The Helen Hamlyn Centre for Design and British Standards Institute (BSI).* Available at: http://extensis.rca.ac.uk:8085/helen_hamlyn_centre_for_design_archive/#/ [Accessed: 23rd April 2018].

Gleeson, B (2001) Disability and The Open City. *Urban Studies* [online] 38, (2), pp. 251-265. DOI: https://doi.org/10.1080/00420980123531. [Accessed: 17th July 2017].

Goffman, E. (1991) *Asylums.* London: Penguin Books.

Goody, J. (1972) The Evolution Of The Family. In: Laslett, P. (ed.) *Household and Family in Past Times.* Cambridge: Cambridge University Press, pp. 103-124.

Go-Un, J. (2017) *Ageing Society. The Situation Of Japan Now.* Tokyo: The University of Tokyo.

Gram-Hanssen, K. and Bech-Danielsen, C. (2004) House, Home and Identity from a Consumption Perspective. *Housing, Theory and Society* [online] 21(1), pp. 17-26. DOI: 10.1080/1403609041002581 [Accessed: 12 April 2018].

GSD Harvard (2016) *Richard Sennett: The Open City* [online video] Available at: https://youtu.be/eEx1apBAS9A [Accessed: 1st May 2017].

GSD Harvard (2017) *Richard Sennett: The Open City* [online video] Available at: https://www.youtube.com/watch?v=7PoRrVqJ-FQ [Accessed: 1st November 2017].

Gunnar Edebalk, P. (2010) Ways of Funding and Organising Elderly Care in Sweden Population Ageing - A Threat to the Welfare State? In: Bengtsson, T. (ed.) *Population Ageing - A Threat to the Welfare State?: The Case of Sweden.* New York (NY): Springer, pp. 65-80.

Hagestad, Gunhild O., and Uhlenberg, Peter. 2005. The Social Separation of Old and Young: A Root of Ageism. *Journal of Social Issues* [online] 61 (2), pp.343-360. DOI:

https://doi.org/10.1111/j.1540-4560.2005.00409.x [Accessed: 12 April 2018].

Hakkinen U., Martikainen P., Noro, A., Nihtila, E., Peltola, M. (2008) Aging, Health Expenditure, Proximity to Death, And Income In: *Finland. Health Economics, Policy and Law* [online] (3), pp. 165-195. DOI: 10.1017/S174413310800443X [Accessed: 12 April 2018].

Halsall B., and Macdonald, R.G. (2015, a) *Design for Dementia, Volume 1.* Liverpool: HLP partnership.

Halsall B., and Macdonald, R.G. (2015, b) *Design for Dementia, Volume 2.* Liverpool: HLP partnership.

Handler, S. (ed.) (2014) *An Alternative Age - Friendly Handbook.* Manchester: The University of Manchester Library.

Harvey, D. (1996) *Justice, Nature, and the Geography of Differences.* Cambridge: Balckwell.

Hashimoto, A. (1996) *The Gift of Generations: Japanese and American Perspectives on Aging and the Social Contract.* Cambridge: Cambridge University Press.

Hayami, A., and Uchida, N. (1972) Size Of Household In A Japanese County Throughout The Tokugawa Era. In: Laslett, P. (ed.) *Household and Family in Past Times.* Cambridge: Cambridge University Press, pp. 473-516.

Hayashi, M. (2011) The Care Of Older People In Japan: Myths And Realities Of Family 'Care.' *History and Policy* [online], 3rd June 2011. Available at: http://www.historyan-

dpolicy.org/policy-papers/papers/the-care-of-older-people-in-japan-myths-and-realities-of-family-care. [Accessed: 20th July 2017].

Hayashi, M. (2013) The Lesson Japan Has For The UK On Dementia. *The Guardian* [online], 11th June 2013. Available at: https://www.theguardian.com/society/2013/jun/11/dementia-lessons-from-japan-hunt [Accessed: 17th July 2017].

Hayashi, M. (2014) Dementia Care in Japan is Being Solved Through Volunteer Schemes, not Government. *The Guardian* [on-line], 18th November 2014. Available at: https://www.theguardian.com/social-care-network/2014/nov/18/dementia-care-japan-community-volunteer-schemes [Accessed: 17th July 2017].

Hayashi, M. (2015) Dementia: Japan Experience. *Proceeding of the Dementia Awareness Week Conference* [on-line] Glasgow. 1st June 2015. Available at: http://daw.dementiascotland.org/wp-content/uploads/2015/06/Mayumi-Hayashi-Japans-Policy.pdf [Accessed: 20th July 2017].

Hayo, H. (2015) Diagnosis and Support for Younger People with Dementia. *Art & Science Dementia* [online] Series 6, pp. 36-40. DOI: pdfplus/10.7748/ns.29.47.36.e9197 [Accessed: 6th November 2016].

Healthcare Design and Management (2014) *Dementia Care, a Five Points Approach to Design Dementia Environments* [online]. Available at: http://www.healthcaredm.co.uk/show-article.asp?articleid=95. [Accessed: 10th November 2016].

Henke N., Kadonaga S., and Kanzler, L. (2009) Improving Japan's Health Care System. *McKinsey Quarterly* [online], 10th March 2009. Available at: http://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/improving-japans-health-ca-

re-system. [Accessed: 6th November 2016].

Highnett, S., Otter, M. E., Keen, C. (2016) Safety Risks Associated With Physical Interactions Between Patients And Caregivers During Treatment And Care Delivery In Home Care Settings: A Systematic Review. *International Journal of Nursing Studies* [online] 59 pp. 1-14. DOI: http://dx.doi.org/10.1016/j.ijnurstu.2016.02.011 [Accessed: 26th April 2016].

Hill, K., Milewski, N. (2007) Family Change And Migration In The Life Course: An Introduction. *Demographic Research* [online] 17(19), pp. 567-590. DOI: 10.4054/ DemRes.2007.17.19. [Accessed: 12 April 2018].

Hoek, J. F. (2000) Health Care for Older Persons, a Country Profile: The Netherlands. *Journal of the American Geriatrics Society* [online] 48 (2), pp. 214. DOI: 10.1111/j.1532-5415.2000.tb03915.x. [Accessed: 16th June 2018].

Hoek, F., Ribbe, M. W., Hertogh, C. M. P., Van der Vleuten, C. P.M. (2003) The Role Of Specialist Physician In Nursing Homes: The Netherlands' Experience. *International Journal of Geriatric Psychiatry* [online] 18, pp. 244-249. DOI: 10.1002/gps.816. [Accessed: 16th June 2018].

Hodgson, K. (2011) *Multigenerational Planning.* Chicago (IL): American Planning Association.

Hofman A., Rocca W.A., Brayne C., Breteler M.M., Clarke M., Cooper B, Copeland J.R.., Dartigues J.F., da Silva Droux A., Hagnell O. (1991) The Prevalence of Dementia in Europe: a Collaborative Study of 1980-1990 Findings. Eurodem Prevalence Research Group. *International Journal of Epidemiology* [online] 20 (3), pp. 738-748. DOI: https://

doi.org/10.1093/ije/20.3.736 [Accessed: 12 April 2018].

Hoglund, J.D. and Ledewitz, S.D. (1999) Designing To Meet The People With Alzheimer's Disease. In: Schwartz, B. and Brent R. (eds.) *Ageing, Autonomy, and Architecture: Advances in Assisted Living.* Baltimore (MD): Johns Hopkins University Press. pp. 229-261.

Holstein, M. (1997) Alzheimer's Disease And Senile Dementia, 1885 – 1920: An Interpretative History Of Disease Negotiation. *Journal of Ageing Studies* [online] 97 pp. 1-13. DOI: 10.1007/s11013-011-9219-x. [Accessed: 17th November 2016].

Hopflinger, F. (2008) A Second Half Of Life: A Period In Transformation. In: Huber, A. (ed.) *New Approaches to Housing for the Second Half of Life (Living Concepts).* Basel: Birkhauser GmbH, pp. 31-46.

Hori, S., and Cusack, S. (2006) Third Age Education In Canada And Japan: Attitude Towards Ageing And Participation In Learning. *Educational Gerontology,* [online] 32 pp. 463-481. DOI: 10.1080/03601270600685677 [Accessed: 11 January 2017].

Hotta, S. (2016) Transition Toward Community-Based Integrated Care In Japan: Lessons From "Buurtzorg" As A Sustainable Community Care Model. *Proceeding of the VON Conference* [online] Toronto. 18th August 2016. Available at: http://www. ryerson.ca/content/dam/crncc/knowledge/eventsandpresentations/2016/Hotta%20 2016%20Japan%20LTC%20system2.pdf.

Huber, A (2008) *New Approaches to Housing for the Second Half of Life (Living Concepts).* Basel: Birkhauser GmbH.

Inoue, Y. (2017) Physical Environment and Institutional Settings for Dementia Friendly Community. *Proceeding of the 32nd International Conference of Alzheimer's Disease* [online] Kyoto. 27 April. Available at: https://www.alz.co.uk/sites/default/files/conf2017/o04-03-yutaka-inoue-physical-environment-and-institutional-settings-dementia-friendly-communities.pdf [Accessed: 17th July 2017].

Iwarsonn, S., and Stahl, A. (2003) Accessibility, Usability And Universal Design— Positioning And Definition Of Concepts Describing Person-Environment Relationships. *Disability and Rehabilitation* [online] 25(2), pp. 57-66. DOI: 10.1080/dre.25.2.57.66 [Accessed: 15th May 2017].

Jacobs, J. (1961) *The Death And The Life Of The Great American Cities.* New York (NY): Random House.

Jay, M. (2014) The Geel Question. *Aeon* [online], January 2014. Available at: https://aeon.co/essays/geel-where-the-mentally-ill-are-welcomed-home [Accessed: 16th November 2016].

Jay, M. (2016) *Bedlam: the Asylum and Beyond.* 15 September 2016 - 15 January 2017. London: Wellcome Collection.

Jay, M. (2016) *This Way Madness Lies.* London: Thames and Hudson.

Jonsson, L., Jonhagen, M. E., Kilander, L. Hilkka, Soininen, H., Hallikainen, M., Waldemar, G., Nygaard, H., Andreasen, N., Winblad, B. and Wimo, A. (2006) Determinants Of Costs Of Care For Patients With Alzheimer's Disease. *International Journal Geriatric Psychiatry* [online] 21, pp. 449-459. DOI: 10.1002/gps.1489 [Accessed: 12th April 2018].

Kang, H. (2012) Correlates Of Social Engagement In Nursing Home Residents With Dementia. *Asian Nurs Res* [online] 6(2), pp. 75-81. DOI: 10.1016/j.anr.2012.05.006. [Accessed: 19th June 2017].

Kose, S., and Nakaohji, M. (1991) Housing the Aged: Past, Present, and Future; Policy Development by the Ministry of Construction of Japan. *Journal of Architectural and Planning Research* [on-line] 8(4), pp.296-306 DOI: http://www.jstor.org/stable/43029049. [Accessed: 19th June 2017].

Kose, S. (1998, a) Possibilities For Change Toward Universal Design: Japanese Housing Policy For Seniors. *Journal of Ageing and Social Policy* [online] 8, pp. 161-171. DOI: 10.1300/J031v08n02_11 [Accessed: 19th June 2017].

Kose, S. (1998, b) Housing For An Ageing Society: Adapting Housing Design Toward Universality Is The Minimum Requirement For Inclusion. *Ageing, Disability and Independence* [on-line] 22 pp. 19-39. DOI: 10.3233/978-1-58603-902-8-19. [Accessed: 19th June 2017].

Kose, S. (2001, a) The Impact of Aging on Japanese Accessibility Standards. In: Preiser W. and Ostroff E. (eds.) *Universal Design Handbook.* London: McGraw-Hill, pp. 11.1-11.12.

Kose, S. (2001, b) Universal Design for the Aging. In: Karwowski, W. (ed.) *International Encyclopaedia of Ergonomics and Human Factors.* London: Taylor & Francis, pp. 182-184.

Kose, S. (2001, c) *Design Guidelines of Dwelling for the Ageing Society: Japanese*

Approach Toward Universal Design (BTC 19). Wellington (New Zealand): CIB World Building Congress.

Kose, S. (2001, d) Design Guidelines Of Public Collective Housing For The Aging Society In Japan. *Report of the CIB Expert Seminar on Building Non-Handicapping Environments.* Budapest [online]. Available at: http://www.independentliving.org/cib/cibbudapest13.html [Accessed: 19th June 2017].

Kose, S. (2006) Universal Design Of Dwelling In Japan: Who Are The Assumed Residents? *Gerontech Journal* [online] 5 (3) pp. 170-173. DOI: http://dx.doi.org/10.4017/gt.2006.05.03.006.00. [Accessed: 19th June 2017].

Kose, S. (2009) How Can The Exploding Senior Population Be Accommodated? Japanese Struggle Towards Inclusive Design. *Journal of Engineering Design* [online] 21. pp. 165-171. DOI: http://dx.doi.org/10.1080/09544820903310683 [Accessed; 19th June 2017].

Kose, S. (2013) *Designing Dwelling Towards a Highly Aged Society: Japanese Experience as a Forerunner.* 2013 Utzon Lecture Series. [online] Sidney. 6th November [Accessed: 19th June 2017].

Kose, S. (2017) *interview* with Davide Landi. Liverpool – Shizuoka, 19th of June 2017.

Kochhar R., and Oates, R. (ed.) (2014) Attitude about Aging: A Global Perspective. In a Rapidly Graying World, Japanese Are Worried, Americans Aren't. *PewResearchCerter* [online], 30th January 2014. Available at: http://www.pewglobal.org/2014/01/30/attitudes-about-aging-a-global-perspective/. [Accessed: 6th November 2016].

Kowalewski, P. J. (1886) Sur la Curabilite De La Demence. *Annales Medico –Psycologique*, 44, pp. 40-53.

Kröger T, Leinonen A. (2012) Transformation By Stealth: The Retargeting Of Home Care Services In Finland. *Health and Social Care in the Community* [online] 20(3), pp. 319-327. DOI: 10.1111/j.1365-2524.2011.01047.x [Accessed: 12 April 2018].

Landi, D. (2017) Towards New Architectural and Urban Typologies: Thinking, Making and Living as a Post Occupancy Evaluation Method. *Conscious Cities Journal* [online] 3. Available at: http://www.ccities.org/towards-new-architectural-urban-typologies-thin-king-making-living-post-occupancy-evaluation-method/.   [Accessed: 27th   January 2018].

Langa, K. M. (2015) Is the Risk of Alzheimer's Disease and Dementia Declining? *Alzheimer's Research & Therapy* [online] 7, pp. 34. DOI: 10.1186/s13195-015-0118-1. [Accessed: 6th November 2016].

Laslett, P. (ed.) (1972) *Household and Family in Past Times.* Cambridge: Cambridge University Press.

Laslett, P. (1989) *A Fresh Map of Life: The Emergence of the Third Age.* London: Weidenfeld and Nicolso.

Lawrence, C., and Leibing, A. (eds.) (2006) *Thinking about Dementia: Culture, Loss, and The Anthropology Of Senility.* London: Rutgers University Press.

Lawton, K., and Silim, A. (eds.) (2012) *Pressures and Priorities, The Long-Term Outlook From Britian's Public Finances*. London: IPPR.

Lawton, M.P., Fulcomer, M. Kleban, M. (1984) Architecture for the Mentally Impaired Elderly. *Environment and Behaviour* [online] 16(6) pp. 730-757. DOI: 10.1177/0013916584166004 [Accessed: 8th June 2017].

Leichsenring K. (2004) Developing Integrated Health And Social Care Services For Older Persons In Europe. *International Journal of Integrated Care* [online] 4(3), pp. None. DOI: http://doi.org/10.5334/ijic.107 [Accessed: 12th April 2018].

Levy, Becca R. (2017) Age-Stereotype Paradox: Opportunity for Social Change. *The Gerontologist* [online] 57 (S2), pp. 118-126. DOI: https://doi.org/10.1093/geront/gnx059 [Accessed: 12 April 2018].

Lishman, W.A. (1987) *Organic Psychiatry: the Psychological Consequences of Cerebral Disorder.* Oxford: Blackwell Scientific.

Lloyd, L., Tanner, D., Milne, A., Ray, M., Richards, S., Sullivan, M. P., Beech, C. and Phillips, J. (2014) Look After Yourself: Active Ageing, Individual Responsibility and the Decline of Social Work with Older People in the UK. *European Journal of Social Work* [online] 17(3), pp.322-335. DOI: 10.1080/13691457.2013.829805 [Accessed: 12th July 2018].

Long, S. O. (ed.) (1999) *Lives In Motion: Composing Circles Of Self And Community In Japan.* Ithaca (NY): Cornell University Press.

Loomis, L. M., Sorce, P. and Tyler, P. (1989) A Lifestyle Analysis Of Healthy Retirees And Their Interest In Moving To A Retirement Community. *The Journal Of The Housing For The Elderly* [online] 5 (2) pp. 19 – 33. DOI: http://dx.doi.org/10.1300/J081V05N02_03. [Accessed: 21st December 2016].

Martikainen, P., Moustgaard, H., Murphy, M., Einiö, E. K., Koskinen, S., Martelin, T., Noro, A. (2009) Gender, Living Arrangements, and Social Circumstances as Determinants of Entry Into and Exit From Long-Term Institutional Care at Older Ages: A 6-Year Follow-Up Study of Older Finns. *The Gerontologist* [online] 49 (1), pp. 34–45. DOI: https://doi.org/10.1093/geront/gnp013. [Accessed: 12 April 2018].

Massey, D. (2005). *For Space.* Thousand Oaks: Sage.

McCracken A., L. and Fitzwater E. (1989) The Right Environment For Alzheimer's. *Geriatric Nursing* [online] 10, pp. 293-294. [Accessed 7th July 2017].

Means, R. (2007) Safe as Houses? Ageing in Place and Vulnerable Older People in the UK. *Social Policy and Administration* [online] 41 (1), pp. 65-85. DOI: 10.1111/j.1467-9515.2007.00539.x [Accessed: 11th November 2016].

MetLife (ed.) (2013) *Liveable Community Indicators for Sustainable Aging in Place. The MetLife Mature Market Institute.* New York (NY): Stanford Centre on Longevity.

Ministry of Social Affairs and Health (2013) *National Memory Programme 2012-2020 .Creating a "Memoryfriendly" Finland.* Helsinki: Ministry of Social Affairs and Health. Available at: http://www.alzheimer-europe.org/Policy-in-Practice2/National-Dementia-Strategies/Finland#fragment1. [Accessed: 12 April 2018].

Moneo, R. (2010) *Remarks on 21 Works.* New York (NY): Monicelli Press.

Morel, N. (2007) From Subsidiarity To "Free Choice": Child- And Elderly-Care Policy Reforms In France, Belgium, Germany And The Netherlands. *Social Policy and Administration* [online] 41 (6), pp.618-637. DOI: hal-01021363 https://hal-sciencespo.

archives-ouvertes.fr/hal-01021363 [Accessed: 20th December 2016].

Moring, B. (1993) Household and Family in Finnish Coastal Societies 1635-1895. *Journal of Family History* [online] 18 (4) pp. 395-414. DOI: https://doi.org/10.1177/036319909301800407 [Accessed: 12th April 2018].

Moring, B. (2002) Widowhood Options And Strategies In Preindustrial Northern Europe: Socioeconomic Differences In Household Position Of The Widowed In 18th And 19th Century Finland. *The History of the Family* [online] 7(1), pp.79-99. DOI: https://doi.org/10.1016/S1081-602X(01)00097-5. [Accessed: 12 April 2018].

Mossialos, E., and Wenzl, M. (eds.) (2015) *International Profiles Of Health Care Systems.* London: London School of Economics and Political Science.

Mumford,L. (1956) *For Older People: Not Segregation But Integration.* London: F.W. Dodge Corporation.

Muramatsu, N. Akiyama, H. (2011) Japan: Super Ageing Society Preparing For The Future. *The Gerontologist,* 51 (4) [online] pp. 425-432. DOI:10.1093/geront/gnr067. [Accessed: 17th November 2016].

Murphy, M., Martikainen, P. & Pennec, S. (2006) Demographic Change And The Supply Of Potential Family Supporters In Britain, Finland And France In The Period 1911–2050/Changements Demographiques Et Disponibilite Des Soutiens Familiaux En Grande-Bretagne, En Finlande Et En France Entre 1911 Et 2050. *European Journal Population* [online] 22, pp. 219-240 DOI: https://doi.org/10.1007/s10680-006-9003-8 [Accessed: 12 April 2018].

Mostafavi, M. (2017) *The Ethics of the Urban: the City and the Space of the Political.* Zurich: Lars Muller Publishers.

Nakane, C. (1970) *Japanese Society.* Los Angeles (CA): University of California Press.

Nakanishi, M., and Nakashima, T. (2014) Features Of The Japanese National Dementia Strategy In Comparison With International Dementia Policies: How Should A National Dementia Policy Interact With The Public Health- And Social-Care Systems? *Alzheimers Dementia* [online] 10(4), pp. 468-476. DOI: 10.1016/j.jalz.2013.06.005. [Accessed 20th July 2017].

Neugarten, L. B. (1974) Age Groups in American Society and the Rise of the Young-Old. *The ANNALS of the American Academy of Political and Social Science* [online] 415 pp. 187-198. DOI: 10.1177/000271627441500114 [Accessed: 12th October 2016].

OECD (2011) *Doing Better for Families.* Paris: OECD Publishing.

OECD (2012) *Compact city*. Paris: OECD Publishing.

OECD (2015, a) *Pensions at a Glance 2015.* Paris: OECD Publishing.

OECD (2015, b) *Ageing in City.* Paris: OECD Publishing.

OECD (2016) *Territorial Review, Japan 2016.* Paris: OECD Publishing.

Ohno, H. (2017) *Fiber City: Tokyo 2050*. Tokyo: University of Tokyo Press.

Oliver, C, (2007) *Retirement Migration: Paradoxes of Ageing.* London: Routledge.

Olsberg D., and Winters, M. (2005) *Ageing in Place: Intergenerational and Interfamilial Housing Transfers and Shifts in Later Life.* Melbourne: AHURI.

Ortman J. M., Velkoff V.A., and Hogan, H. (2014) *An Aging Nation: The Older Population in the United States.* New York (NY): U.S. Department of Commerce.

Otake, T. (2017) Developer Taps Power Of Design To Create Dementia-Friendly Housing In Setagaya. *The Japan Times* [online], 3rd May 2017. Available at: http://www.japantimes.co.jp/news/2017/05/03/national/science-health/developer-taps-power-design-create-dementia-friendly-housing-setagaya/#.WWz3R-SWzcs [Accessed: 17th July 2017].

Ozaki, R. (2002) Housing as Reflection of Cultures. *The Housing Journal* [on-line] 17, pp. 209-227. DOI: 10.1080/02673030220123199 [Accessed: 27th September 2016].

Peace, S. (2003) The Development Of Residential And Nursing Home Care In The United Kingdom. In: Katz, J. S. and Peace, S. (eds.) *End of Life In Care Homes: A Palliative Care Approach.* Oxford: Oxford University Press, pp. 15-42.

Peace, S., Holland, C., and Kellaher, L. (2011) 'Option Recognition' In Later Life: Variations in Ageing in Place. *Ageing & Society* [online] 31, pp. 734-757. DOI: 10.1017/S0144686X10001157 [Accessed: 11th November 2016].

Peng, F. C.C. (2003) Is Dementia a Disease? *The Gerontology* [online] 49 pp. 384-391. DOI: 10.1159/000073767. [Accessed: 20th December 2016].

Picon, A. (1988) *French Architects and Engineers*. Cambridge: University Cambridge

Press.

Pierce, J. (2011) Relational Place-Making: The Networked Politics of Place [online] *Transactions* 36(1). Available at: https://www2.clarku.edu/departments/geography/ pdfs/Deb%20Martin/2011_Pierce_Martin_Murphy_TIBG.pdf.
[Accessed: 15th February 2018].

Pietikäinen, P. (2015) *Madness: a History.* London: Routledge.

Pinel, P.(1806) *A Treatise on Insanity: In which are Contained the Principles of a New and More Practical Nosology of Maniacal Disorders Than Has Yet Been Offered to the Public*. Sheffield: W. Todd.

Piškur, B. (2014) Participation and Social Participation: Are They Distinct Concepts? *Clinical Rehabilitation* [online] 28(3), pp. 211-220. DOI: 10.1177/0269215513499029.
[Accessed: 15th February 2017].

Population Division, DESA (2015) *World Population Ageing Report.* New York (NY): United Nations.

Project Office. *Madlove* [online video] Available at: http://www.projectsoffice.co/ projects/#/madlove/ [Accessed: 5th December 2016].

Provencher, C., Keating, N., Warburton, J. and Roos, V. (2014) Ageing and Community: Introduction to the Special Issue. *Journal of Community & Applied Social Psychology* [online] 24 pp. 1-11. DOI: 10.1002/casp.2171 [Accessed: 16th January 2017].

Regnier, V. (1997) The Physical Environment And Maintaining Of Competence.

In: Willis, S.L, Warner Schaie, K. and Hayard, M. (eds.) *Societal Mechanisms For Maintaining Competence In Old Age.* New York (NY): Springer, pp. 232-250.

Relph, E. (1976) *Place and Placelessness.* London: Pion Limited.

Richard, N. (2011) *American Madness: The Rise and Fall of Dementia Praecox.* Cambridge (MA): Harvard University Press.

Robertson, R., Gregory, S., and Jabbal, J. (2013) *The Social Care And Health Systems Of Nine Countries.* London: Commission on the Future of Health and Social Care in England.

Rojo Perez, F., Fernandez-Mayoralas, G., Pozo Rivera, F. E., and Rojo Abuin, J. M. (2001) Ageing In Place: Prediction Of The Residential Satisfaction Of Elderly. *Social Indicators Research* [online] 54 pp. 173-208. DOI: http://www.jstor.org/stable/27526934. [Accessed: 11th November 2016].

Rosenbaum, P. and Stewart D. (2004) The World Health Organization International Classification of Functioning, Disability and Health: a Model to Guide Clinical Thinking, Practice and Research in the Field of Cerebral Palsy. *Seminars Paediatric Neurology* [online] 11(1), pp. 5-10. DOI: https://doi.org/10.1016/j.spen.2004.01.002 [Accessed: 15th February 2017].

Rossi, A. (1982) *The Architecture of the City.* Cambridge (MA): MIT Press

Sand, J. (2013) *Tokyo Vernacular.* Berkeley (CA): University of California Press.

Sanderson, W. C., and Scherbov, S. (2007) A New Perspective On Population Aging.

Demographic Research [online] 16, pp. 27-58. DOI: 10.4054/DemRes.2007.16.2. [Accessed: 15th February 2017].

Sassen, S. (2014) *Expulsions: Brutality and Complexity in the Global Economy.* Cambridge (MA): Harvard University Press.

Satoshi, I. (2012) Environmental Design for People With Dementia. *Proceedings of the 8h International Symposium for Environment Behaviour Studies* [online] Changsha. [Accessed: 25th July 2017].

Sennett, R. (1993) *The Conscience of the Eye: The Design and Social Life of Cities*. New York (NY): W.W.NORTON AND COMPANY.

Sennett, R. (2003) *Respect. The Formation of Character in an Age of Inequalities*. London: Penguin Books.

Sennett, R. (2004) *The Fall of Pubic Man.* New York (NY): Penguin Books.

Sennett, R. (2006) The Open City. *LSEcities: London School Of Economic Cities* [online]. 6th November 2006. Available at: https://lsecities.net/media/objects/articles/the-open-city/en-gb/ [Accessed: 3rd May 2017].

Sennett, R. (2018) *Building and Dwelling. Ethics of the City.* London: Penguin Books.

Shirahase, S. (2014) *Social Inequality in Japan.* London: Routledge.

Schutz, A. (1972) *Phenomenology Of The Social World.* London: Heinemann.

Sieg, L. and Ha, K. (2016) *Dementia Frontrunner Japan Destigmatises Condition, Stresses Community Care* [online] 15th April 2016. Available at: http://www.reuters.com/article/us-japan-dementia-widerimage-idUSKCN0XB2WS. [Accessed: 17th July 2017].

Simpson, D. (2015) *Young - Old: Urban Utopia for an Ageing Society.* Zurich: Lars Muller Publisher.

Sixsmith, A., and Sixsmith, J. (2008) Ageing in Place in the United Kingdom. *Ageing Int* [online] 32, pp. 219-235. [Accessed: 11th November 2016]. DOI: 10.1007/s12126-008-9019-y.

Sloane, P. D., Mitchell, M., Preisser, J. S., Phillips, C., Commander, C., Burker, E. (1998) Environmental correlates of resident agitation in Alzheimer's disease special care units. *Journal of the American Geriatrics Society* [online] 46 pp. 862-869. DOI: 10.1111/j.1532-5415.1998.tb02720.x. [Accessed: 10th March 2017].

Smets, A.J.H. (2009) Housing For The Elderly: Segregated In Senior Cities Or Integrated In Urban Society? *Proceedings of the 4th International Conference of the International Forum on Urbanism (IFoU).* [online] Amsterdam/Delft. 26th November 2009, pp. 269-278 [Accessed: 10th March 2017].

Smith, R. J. (1972) Small Families, Small Households, And Residential Instability: Town And City In 'Pre-Modern' Japan. In: Laslett, P. (ed.) *Household and Family in Past Times.* Cambridge: Cambridge University Press, pp. 429-472.

Smith, G. (ed.) (2016) *Dementia Care A Practical Approach.* London: CRC Press.

Smits, C. H. M., Van den Beld, H.K., Aartsen, M. J., and Schroots, J. J. F. (2014) Aging in The Netherlands: State of the Art and Science. *The Gerontologist* [on-line] 54 (3), pp. 335–343, DOI: https://doi.org/10.1093/geront/gnt096 [Accessed: 30th January 2017].

Steverik, B. (2001) When and Why frail Elderly People give Up Independent Living. *Ageing and Society* [online] 21 (1), pp. 45-49. DOI: https://doi.org/10.1017/S0144686X01008066. [Accessed: 16th June 2018].

Sulkava, R., Wikstrom J., Aromaa A., Raitasalo R., Lehtinen V., Lahtela K., and Palo, J. (1985) Prevalence of Severe Dementia in Finland. *Neurology* [online] 35 (7) pp. 1025. DOI: https://doi.org/10.1212/WNL.35.7.1025. [Accessed: 12th April 2018].

Takeda, A., Takana, N., Chiba, T. (2010) Prospects Of Future Measures For Persons With Dementia In Japan. *Psychogeriatrics* [online] 10(2), pp. 95-101. DOI: 10.1111/j.1479-8301.2010.00317.x. [Accessed: 17th November 2016].

Tinker, A., Gill, J., and Eloi, R. (2013) *Assisted Living Platform-the Long Term Care Revolution. A Study Of Innovatory Models To Support Older People With Disabilities In The Netherlands.* London: Housing LIN.

Townsend, P. (1981) The Structured Dependency of the Elderly: A Creation of Social Policy in the Twentieth Century. *Ageing and Society* [on-line] 1 (1), pp. 5-28. DOI: https://doi.org/10.1017/S0144686X81000020. [Accessed: 1st December 2016].

Traphagan, J. (1998) Localizing Senility: Illness And Agency Among Older Japanese. *Journal of Cross-Cultural Gerontology* [on-line] 13, pp. 81-98. DOI: 10.1023/A:1006566300463. [Accessed: 17th November 2016].

Traphagan, J.W. (2006) Being a Good Rojin. Senility, Power and Self – Actualization in Japan. In: Lawrence, C., and Leibing, A. (eds.) *Thinking about Dementia: Culture, Loss, and the Anthropology of Senility.* London: Rutgers University Press, pp. 269-287.

Turner, J.F.C. (1972) Housing as A Verb. In: Turner, J. F. C., and Fichter, R. (eds.) *Freedom To Build: Dweller Control Of The Housing Process.* New York (NY): Macmillan, pp.148-175.

University of Cambridge (2012) *Cambridge Advanced Learners Dictionary.* Cambridge: University of Cambridge Press.

University of Toronto (2013) *Cities and Ageing.* Toronto (CA): Philips.

Van der Voordt, D.J.M., and Houben, P.P.J. (1993), New Combinations Of Housing And Care For The Elderly In The Netherlands. *Netherlands Journal of Housing and Environmental Research* [online] 8 (4), pp. 301-325. DOI: http://www.jstor.org/stable/41107597 [Accessed: 26th April 2016].

Van der Voordt, D.J.M. (1997), Housing And Care Variants For Older People With Dementia. Current Trends in the Netherlands. *American Journal of Alzheimer's Disease* [online] 12 (2), pp. 84-92. Available at: http://bk.home.tudelft.nl/fileadmin/Faculteit/BK/Over_de_faculteit/Afdelingen/Real_Estate_and_Housing/Organisatie/Medewerkers_RE_H/Personal_pages/VanderVoordt/General_list/doc/1997-Alzhei-mersDisease_housingcare.pdf [Accessed: 26th April 2016].

Van der Voordt, T. J.M. (2017) *Interview* with Davide Landi. Delft (The Netherlands).

Van der Woude, A. M. (1972) Variations In The Size And Structure Of The Household

In The United Provinces Of The Netherlands In The Seventeenth And Eighteenth Centuries. In: Laslett, P. (ed.) *Household and Family in Past Times.* Cambridge: Cambridge University Press, pp. 299-318.

Van Hoof. J., Kort, H.S.M., Rutten, P.G.S., and Duijnstee, M.S.H. (2011) Ageing-In-Place with the Use Of Ambient Intelligence Technology: Perspectives Of Older Users. *International Journal Of Medical Informatics* [online] 80, pp. 310-331. DOI: 10.1016/j. ijmedinf.2011.02.010 [Accessed: 11th January 2017].

Vuorenkoski, L. (2008) *Health Care Systems in Transition – Finland*. Helsinki: European Observatory on Health Care System.

Walker, S. (2011) *Gordon Matta-Clark: Art, Architecture, and The Attack On Modernism*. London: I.B. Tauris & Co. Ltd.

Wall, R. (1972) Means of Family Structure in England from Printed Sources. In: Laslett, P. (ed.) *Household and Family in Past Times.* Cambridge: Cambridge University press, pp.159-254.

Wessely, S. (2016) Inside Bedlam, England's First Mental Institution. *The Times,* 15th September 2016. Available at: https://www.thetimes.co.uk/article/inside-bedlam-en-glands-first-mental-institution-2tbn853pz [Accessed: 15th November 2016].

Williamson, J. B., and Higo, M. (2007) Older Workers: Lessons From Japan. W*ork Opportunities for Older Americans* [online] Series 11, pp. 1-9. DOI: https://www. researchgate.net/publication/4848036 [Accessed: 16th January 2017].

Wiles, J.L., Leibing, A., Guberman, N. Reeve, J. and Allen, R. E. S. (2011) The Meaning

of "Aging in Place" to Older People. *The Gerontologist* [online] 52, 3, pp. 357-366. DOI:10.1093/geront/gnr098 [Accessed: 11th November 2016].

Wister, A. V. and Burch, T. K. (1989) Attitudes of the Elderly Towards Living Arrangements. *Journal of Housing for Elderly* [online] pp. 5-18. DOI.org/10.1300/ J081V05N02_02 [Accessed: 17th October 2016].

World Health Organization (WHO) (2001) *International Classification of Functioning, Disability and Health.* Geneva: World Health Organization.

World Health Organisation (WHO) (2012) *Dementia. A Public Health Priority.* London: World Health Organization.

World Health Organisation (WHO), and Ministry of Health Labour and Welfare (2012) *Health Service Delivery Profile*. Tokyo: Ministry of Health Labour and Welfare.

Yamamoto, R. (2011) *Riken Yamamoto.* Tokyo: TOTO.

Yamamoto, R. (2012) *Local Community Area Principles.* Tokyo: INAX Publishing.

Yamamoto, R. (2014) *How to Make A City.* Luzern: Architekturgalerie Luzern.

CHAPTER 2

From the Functionalist Model to Architectural Types in Contemporary Culture: The Open Type

As it has been employed in the title of this chapter, the use of the term 'open type' is underpinned by the notions of "open city" and "open architecture." Jane Jacobs (1961) firstly introduced them, and Richard Sennett (2018) largely speculated on these notions as an urban strategy, while Esra Akcan (2018) gave architectural consistency.   On the other hand, typology refers to the notion of "types" proposed by Aldo Rossi (1982) in his seminal book *The Architecture of the City.*   However, the context then was quite different from the contemporaneous. It is useful to return to the original conception of the notions of "types" and "open" in order to reveal the possible meaning for today's architecture. Therefore, the overall structure of this chapter takes the form of three sections: 1, 2 and 3. Section (1) is *A Brief Critique of Functionalism*. This section frames the urban and architectural contexts that informed social and architectural theorists and professionals about the necessity of alternate architectural and urban strategies. Section (2) is *What is Type?* This section proposes an overview of different notions of types and typology adopted over time by historians, theorists and professionals in the architectural field. The second part of this section is *What is Heterotopia?* This section untangles the notion of Heterotopia through time. It is not included from my perspective as meaning that the heterotopia generates an ideal situation. Rather, this section acts as an additional explanatory tool that broadens the notion of type proposed by this study. Lastly is Section (3) *The Architecture of the "Open City:" The Open Type*. This section illustrates alternate urban theories by Jane Jacobs and Richard Sennett while synthesizing the previous theoretical background in order to crystallize a notion of the type suitable in our contemporary culture. This chapter is, thereby, strengthened by the following chapters, which analyses the different three case studies that are abundantly connected to real diversity (i.e. diverse population, diverse activities, diverse relationships, etc.), clashing with the specialized and uniform older adults' care facilities, which characterize normalness.

The segregation pattern of the 21st century has affected the built environment as well

as its occupants (GSD 2017; Sennett 2008). This has determined socioeconomic and health inequalities and uncertainty (e.g. richer socioeconomic groups are characterized by better health and fewer disabling conditions than poorer groups) (Gleeson 2001; Hurber, 2008). According to the nature of this study, which focuses on older adults' long term care facilities, there is an urgent necessity for opening up functionalist and specialized settings to promote participation and diversity in terms of inhabitants and built environment (Blackman et al. 2003; Gleeson 2001).

Section 1: A Brief Critique of Functionalism

The critique of zoning and single-use development is nothing new in sociology and architecture. The debate has discussed the link between the physical form of the built environment and the two "generative dimensions" of cities and architectures: the "social and economic dimension" (Landi, 2017, p.22). Consequently, this section attempts to illustrate the link since the scientific and technological discoveries of the seventeenth and eighteenth centuries, which led to a new economic model. In particular, the "circulating economy" opposite to a static economic model determined the advent of a new economic figure: the *"Homo Economics"* (Sennett, 1994, p. 256; Kostof, 1992). *Homo Economics* required moving easily through society. This considers the city as the theatre in which to "act socially" was the norm of human existence (Sennett, 2004, p. 144). Nevertheless, people were less concerned about their background (Sennett, 2004). Consequently, the streets became a fundamental urban space in which people could move and act. They were the "artery" and "veins" of the urban body (Sennett, 1994, p. 264; Kostof, 1992). At that time, however, buildings and streets were stuffy, dusty, with exposed sewage and extremely congested. In fact, they were not designed for fostering exchange and mobility. Therefore, buildings and streets were bearers of illnesses such as the 1830 cholera epidemic in England (Markus, 1993; Kostof, 1992; Sennett, 1993). Nevertheless, the technological achievements in the building

construction such as the water supply, elimination and drainage, the provision of fresh air in interior spaces, and the introduction of therapeutic nature supported the designers in the creation of a healthy city on the model of healthy body (Markus, 1993; Sennett, 1994), beyond the initial picturesque aesthetic Enlightened principles (Tafuri, 1976).

Consequently, engineers were the principal actors in dealing with public health issues and the requirements of a new traffic (Sennett, 2018; Kostof, 1992; Picon, 1988). On the one hand, this produced, for instance, a differentiation of the streets in existing and complex urban settlements (i.e. the French boulevards of Haussmann, the Hispanic promenades of Cerda and the glass arcades) (Kostof, 1992; Curtis, 2009). The Enlightened city contributed to preserving health as well as order with the use of nature. The green belt surrounding the pre-industrial urban settlement, for instance, was supposed to stop urban sprawl (Kostof, 1992). The artificial use of nature inside the urban core as a "democratic wildernesses" (Curtis, 2009, p.41), instead, eased the burden of the city on citizens. Frederick Law Olmsted's Central Park in New York (1857) is a remarkable example of an urban lung (Sennett, 2018). On the other hand, the cult of a healthy body tied the notions of hygiene and morality. The cleanliness of citizens' bodies and souls was not only a public health challenge but also a social one. In fact, it constituted a medium for reducing class inequalities. The city started to accommodate a series of special buildings for spa purposes such as bathhouses, pump rooms, clubs, hotels, etc. An early example was the bathhouse built in Edinburgh in 1697 by the College of the Surgeons and Barbers (Markus, 1993).

The "circulating economy" marked the beginning of modern capitalism (Burdett, and Sudjic, 2008; Sennett, 1994). The rapidly growing industrial sector together with the adoption of additional new technologies such as electricity, metallurgy, etc. transformed the city into something different (Geddes, 1915; Sennett, 2004). Geddes (1915, p. 61) borrowed two terms from archaeology in order to describe this transition and its related

challenges. The first was "Paleotechnic;" it framed the industrial society in its early stages. The second was "Neotechnic," which identified the later development of the city. Curtis (2009, p.33), however, labelled this transformation as the "mechanisation of the city;" while Tafuri (1976, p.7) wrote about it as the passage from the city as a structure to the city as an "accumulation mechanism," dominated by technological progress.

In this transition, it is important to take into consideration the metamorphosis of *"Homo Economics"* (Sennett, 1994, p. 256). The establishment and expansion of the industrial society exacerbated the interest of *"Homo Economics"* into the economy of a city and the possibility of accessing it (Geddes, 1915). The city was not any more just the stage in which legitimated social intercourses occurred. The market behaviours came to be the shaping force of the city prevailing on occupants' choices and governments' decisions (Burdett, and Sudjic, 2008; Sennett, 2004). People, therefore, changed their attitude towards the unknown and the strange by emphasising patterns of avoidance (Sennett, 2004; Sennett, 1993; Sennett, 1970).

Consequently, the experience of the streets was dramatically subverted. The design of tramways, train ways, streets for motorised traffic favoured the movement of the masses along mono-functional paths. Inevitably, this affected the notion of sharing a place with the others, and thereby people moved along these spaces in ways that were detached from their urban value, its contents and narratives (Sennett, 1994; Devis, and Monk, 2007; Sennett, 1993; Tafuri, 1976). The realisation of the London underground is an example. It was built at the end of the 19th Century, and it allowed a wider range of people to access the London circumscribed centre. They were able to enter the city mainly for economic reasons such as the experience of the new department stores (Sennett, 1994). People, therefore, did not dwell in the city any more. This was confirmed also by the design of buildings along the modern "artery and veins." They

were separated from the street and the façade became the threshold (Sennett, 1994; Devis, and Monk, 2007; Sennett, 1993).

This was the beginning of zoning and single-use development (Sennett, 2004; Jacobs, 1961). Over time, the diversification of economic activities according to the new economic model drove a diversified growth of cities (Jacobs, 1969). However, it was a compartmentalised diversification with spatial and time implications (Harvey 2001; Harvey 1985). On the one side, new residential and economic areas were mainly placed in the outskirts of the city supporting the requirements of the industrial society and capitalist model for order and efficiency while safeguarding the well-being of city users. On the other, it has strengthened social and economic inequalities, and thereby urban segmentation and degradation (Burdett, and Sudjic, 2008; Kostof, 1992; Harvey, and Herod, 2009). Historically, this division was not totally new. However, industrialisation, modern capitalism, and the globalisation of some companies as factors of urbanisation have brought this division to the extreme.

An early example is the city of Manchester. In the 1830s, the city at the dawn of its industrialisation became the destination for thousands of people from the countryside who aimed to improve their economic situation and social status. These were marginalised in specific areas of Manchester such as a speculative row of housings near to suburban commercial buildings or central houses in poor conditions (Kostof, 1992; Curtis, 2009). Nowadays, the institutionalisation of older adults is an evident example. In this, the "Retirement Utopias" such as Huis Ten Bosh in Japan, Sunset Pointe in Florida, and Costa del Sol in Spain must be reported (Simpson, 2015, p.530). These are retirement villages: committed environments that embed age and dementia friendly environment design guidelines for the accommodation of older adults. They are geographically located in climatically and economic favourable areas and have strong age restrictions (Devis, and Monk, 2007; Simpson, D. 2015). Consequently, both cases are examples

195

of how socio-economic distances and diversities have been converted into physical distances (Kostof, 1992).

By envisioning a city with different levels of "artery" and "veins" in which different types of movements could separately coexist, modernist architects and urbanists could solve the circulation problems (i.e. circulation of goods and people) (Kostof, 1992). In fact, they attempted to answer the question of a modern period and living experience principally characterised by an accelerated rhythm for the sake of efficiency (Claudel, and Ratti, 2016; Sennett, 2018). Consequently, modernist architects and urbanists provided spaces for moving instead of places to inhabit. The economic, political and social resources, which had been generally provided by a non-homogeneous urban environment, were unequally distributed (Harvey, and Herod, 2009; Jacobs, 1969).

In the 1960s, a seminal book was published entitled *The Death and The Life Of The Great American Cities* (Jacobs, 1961). It was Jane Jacobs' political as well as academic manifesto against Robert Moses 'urban vision' (Jacobs, 1961). The author pointed out the hazard of zoning and single-use development by emphasising the important role of cities' density and diversity in terms of economy, buildings and thereby people. For instance, the author identified the streets as the most public places in the city and not just mere infrastructures for the circulation of wheeled traffic. Additionally, she outlined the strategic role of preserving some historical buildings. Firstly, they would guarantee a certain continuity with collective memories and identity of cities. Secondly, historical buildings contribute to the diversity of cities. Nevertheless, these are just two examples proposed by Jacobs in order to illustrate an alternate urban process. As in many packed, narrow and sometimes dark streets and squares, the interweaving of different urban patterns expressed the variation of human nature. By rejecting a total planning, cities would preserve their regenerative capacity. This, thereby, creates cities for everybody or cities that are able to provide something for everybody because they are created

by everybody (Jacobs, 1961). For Jacobs (1961), the city was not a work of art, whilst Rossi's (1982) *The Architecture of the City* underpins its arguments around the analogy of cities as works of art. Cities are works of art in the sense that they are the qualitative and diverse result of a collective design process, but are instead individually imagined and thereby created. The city, therefore, is envisioned as a gigantic man-made object that grows over time. It collects works of engineering and architecture. By doing this, Rossi attributed to the city the capacity of continuously to renew and reform itself as did Jacobs. Even if he recognised the practicality of single-use development, he criticised its superficial and simplifying character. In particular, the author did not accept the notion of functionalism as a tool to bring forms together. Efficiency and empirical order could not inform the city as an artefact. They would reduce the city to a simple agglomeration in which citizens experience it according to what function they exercise. The city, thereby, would become an organisational problem in which are located more or less important functions. Similarly to the work of Jacobs, Rossi's *The Architecture of the City* is his manifesto against zoning and single-use development. He distanced himself from those architects who were considered genius creators. Rossi, according to this, proposed two generative elements of the city: types and events. First, types are the logical principles that are prior to building forms. Second, events come after types, political choices and the collective will of citizens. The commitment of architects to architectural types and the events ensured a certain continuity with the collective memories and intellect of existing urban settlements (Rossi, 1982). Over recent years, Richard Sennett has largely criticised zoning and single-use development, and the city as a result of their application. Sennett named it "closed city," an expression of bureaucratic capitalism in which buildings are destroyed rather than adapted. The art of urban planning has been a victim of a paradox. On the one hand, the availability of technological tools could allow a wide range of design experimentations. On the other, these were under the rubric of political and economic forces, which have supported order and control (Sennett, 2006). In a certain sense, it has fostered

security, although the "closed city" is binary and reductive in terms of forms and social functions (GSD Harvard, 2016; Sennett, 2006). This has determined a dominance of cities with boundaries while limiting their uncertainty which is given by their citizens' appropriation. For example, today's Beijing, Mumbai, Rome are planned in this way (Sennett, 2017). The over determination of functions and thereby of forms produces an apparent urban growth underpinned by integration and equilibrium, while it has made the urban environment subject to decay (Sennett, 2006).

In this, architecture clearly represents only one aspect of more complex reality. However, the works of architecture are central in the generation of a city underpinned by diversity (e.g. diverse age groups), density, collective memories and intellect. Therefore, we should pay special attention to the architectural type, including its theoretical and practical notion.

Section 2: What Is Type?

To start the discussion surrounding the issue of the typology/type, I refer to the work of two theorists whose theories about design could be tested through construction. First, one will consider Rafael Moneo who criticised the modernist approach to architecture, which made obsolete the use of architectural typologies (Moneo, 1978). He, therefore, defined the type as:

The notion of type implies the recognition of common features that allow us to identify those works of architecture that share the same formal structure, leading us again to the age-old question of universality. The side one chooses to be on- Plato versus Aristotle- is crucial in defining the concept of type. While for Platonists a type is the eternal representation of the original idea regardless of specific examples, for Aristotelian it is the common denominator that can be perceived through the careful observation of a

series of works that maintain the principles of continuity throught which history unfolds. These two approaches lead to clearly differentiated theories of architecture. (Moneo, 2010, p.19; Moneo, 1978).

Second, one will discuss Aldo Rossi who supported a massive campaign on the typological approach to design during his career:

Topography, typology and history come to be the measures of the mutations of reality, together defining a system of architecture wherein gratuitous invention is impossible. Thus they are opposed theoretically to the disorder of contemporary architecture. (1982, p. Introduction to German Edition).

If Rossi's theories on architectural types were in part affected by a latent idealism – a tendency to the totalitarian (Popper, 1945) - Moneo's ideas also imply a certain kind of idealism inherited from the architects of "La Tendenza" although the Aristotelian reference mitigated it (Ray, 2018). Nevertheless, Rossi's contribution to architectural types can be synthesised as follows: on the one hand, types are together with "events" producers of the city; on the other, types are not a building itself, or its forms. They frame the permanent logical principles, the essence of a work of architecture which changes in shapes and aspirations from society to society. In particular, Rossi differentiated the notion of types from the notion of models. While types come before forms, which change through time and contexts, the model instead sets the execution and thereby its repetition as it is. If the outcomes of a model resemble one another, the outcomes of a type do not. This lets a work of architecture be susceptible to infinite variations, although the type ensures a continuity with the collective memory and collective intellect to the making of the urban environment (Rossi, 1982).

In those same years, Christopher Alexander significantly contributed to the discourse

of architectural types. In his first published work *Notes on the Synthesis of Form* (Alexander, 1973), the author, while stating the rising complexity of functional problems due to a deeply socially and economically changed context, recognises the necessity of a conceptual framework in terms of processes and results to approach to this complexity. According to Alexander (1973, p. 73), the architect attempts to conceive a "clarity of forms." It happens only with a clear understanding of the functional and programmatic problem which is posed by the socio-economic context. This is linked to the self-conscious attitude of architects to the problem which is opposite to the un-self-conscious attitude of cultures and contexts in which the functional and programmatic problem is sited. Consequently, the author suggests achieving an equilibrium between these two attitudes. This is possible through the definition of a shared symbolism - language or patterns that is underpinned by a sufficiently wide range of possible design alternatives. They allow architects to overcome the complexity of the functional problem (Alexander, 1973). If *Notes on the Synthesis of Form* identified the necessity of a shared symbolism it would significantly reduce arbitrariness in the discipline of architecture by adopting a scientific method (Ray, 2018).

A Pattern of Language (Alexander, 1977) revealed the core of Alexander's theoretical endeavours. It proposed convenient tools to bridge the gap between spatial and social, natural and artificial dimension of a work of architecture (Picon, 2010). By cataloguing unself-conscious variables, the author identified 253 patterns such as "sunny places, warm colours, front door bench," etc. which could be included in the design process and its outcomes. This ensured an architect would embed the positive quality of these patterns in any design proposal. The more patterns that can be adopted, thereby, the better the quality will be of any work of architecture (Ray, 2018).

The idea of cataloguing to distil common themes is found in another publication of those same years. Nikolaus Pevsner (1976) attempted to broaden the discourse on

architectural types with the book *A History of Building Types*. While the book illustrates a significant bulk of examples, it presents a latent arbitrariness as admitted by the author himself. To investigate three main themes such as functions, styles and materials, Pevsner treats Monuments, Government Buildings, Theatres, Libraries, Museums, Hospitals, Prisons, Hotels, Exchanges, Banks, Warehouses, Office Buildings, Railway Stations, Market Halls, Conservatories, Exhibition Buildings, Shops, Stores, Department Stores, and Factories. The author excludes from the bulk Churches, Educational Buildings, Observatories, Concert Halls, Barracks, and Dwellings because they are already widely covered in the history of architecture, or worthy of another independent volume. Pevsner's typological analysis, however, cannot be fully understood without an acknowledgement of the social context in which each type has developed over time. Even if the focus is on functions, styles and materials, the author does it throughout his writings. Therefore, Alexander and Pevsner's argumentations were influential to the following generations of architectural theorists and historians.

The study by Markus (1993) is a remarkable and consistent example. In his book *Building and Power* (Markus, 1993), the author explored a classification and a language in order to locate different buildings in their social contexts. He did not consider them as an economic, art, or technical object, but as a translator of social changes. In fact, he proposes a classification according to three main themes related to social changes such as "people, knowledge, and things." However, Markus (1993) as Rossi (1982) reported the narrowness and simplifying character of functional labels but they are still useful for a more pragmatic use of architectural types.

Even if these four authors stand in different positions, their contribution to the theme of types helps in crystallising what types are for this study. As an author like Picon (1988) has shown, architectural typologies are the architectural tools for the imitation and reproduction of the society's articulation. Therefore, the type is a general principle

that rejects functional classification or patternisation (e.g. committed environments to the long term care of older adults). It informs physical forms of buildings by embodying socio-economic changes (i.e. the new demographic structure; the rising number of older adults with long-term conditions; the spiralling cost of long-term healthcare services; the shrinking household structure). Alexander (1973) named all these un-self-conscious agents and challenges, which are latent in our contemporaneity as "culture." Therefore, a collection of types composes a city while it establishes a new equilibrium within it (Alexander, 1973).

To conclude this section, I refer again to the work of three contemporary, relatively young theorists whose theories have been tested through their works. In particular, Go Hasegawa, Kersten Geers, and David Van Severen occupy a renewed position towards history and thereby types (Borasi, 2018). The types become an object of experience and experimentation beyond the meaning that it can embed (Hasegawa, 2011). Consequently, history and type are not just studied rather they are something that can be used in contemporary architectural practices (Borasi, 2018). This reveals a new dialogue with history and types. However, I argue that the notion of architectural types for contemporary culture is not only prior to forms and experiences but also to an alternative social order, a socially inclusive order. Consequently, we should now focus on the notion of heterotopia.

What is Heterotopia?

First, I introduce the notion of "heterotopia" through the critical exploration of two French philosophers on this theme and its parallels with the built environment. The term was coined by Michel Foucault in 1967 (1984) and in the 1970s adopted by Henri Lefebvre (2003). However, the European context and, in particular France, at that time was characterised by a strong urbanisation process.

Foucault's (1984, p.24) concept of the "heterotopia" is based on his investigation of the obsession and anxiety associated with the notion of space during the 1960s. On the one hand, Foucault linked it to the technological development started in the 19th century. On the other hand, the process of appropriation and dwelling space by the contemporary society was the cause of this anxiety. It was a space container of "our time, our history," and so, people's lives. This was the departure point for the definition of the "utopia – a no real place." The "Utopia" proposes a perfect form, order, which is opposite to the real space and society. Colin Rowe (1977) described utopia as a social prescription that attempts to picture an image of a good society while our society is imperfect. The "Utopia" would not give alternative options (Rowe and Koetter, 1978). In contraposition, Foucault (1984) presented the "heterotopia - a real place" and its six principles. They can be summarised as follows:

- Heterotopias appear in diverse forms.
- Heterotopias accommodate different functions according to the society in which they exist. This reveals similarities with Lefebvre idea of "space of enjoyment." The attributed function to a space of participation varies over time (Lefebvre, 2014, p.151).
- Heterotopias host apparently diverse and incompatible spaces in a single "real place."
- In Heterotopias, time is a factor for accumulation or temporariness.
- Heterotopias, different from conventional public space, are simultaneously detached and permeable.
- Heterotopias have functions, which are informed by the socioeconomic and cultural complexity of the context (Foucault, 1984).

In this, the author illustrated the principles with some examples. For instance, he referred to the "boarding schools" in the discussion surrounding the first principle, or

the "cemeteries" in the second principle.

A decade after this, there occurred Henri Lefebvre's (2003) arguments. While recognising the convenient but elementary spatial segregation widely adopted in those years they stated an impossibility in maintaining it when the built environment would be occupied (Lefebvre, 2014). This revealed his concerns about a paradoxical relationship between "differentiation – each place and each moment exist only within a whole," and "homogenizations – industrial rationality" characterising urban spaces (Lefebvre, 2003, p.37; Lefebvre, 1996). Consequently, he redefined the three concepts of "utopia, isotropy and heterotopy." In particular, the "utopia" is the "no – place, a place does not occur." It is a projection of an ideal vision in an urban context. In utopias, space becomes obsolete (Lefebvre, 2014; Lefebvre, 1996). The "isotropy is the identical place." It, thereby, identifies a place where everything which surrounds produces homogeneity. Additionally, places analogous to others make them part of the same "isotropy." The "heterotopy - the place of the other, simultaneously excluded and interwoven," is instead capable of generating diversity as an active element. The juxtaposition of different places and differences (also in terms of their inhabitants) is a medium for the creation of relationships. However, Lefebvre clarified also those differences that are not synonymous with segregation. The excessive diversity may generate a place that is on its own: segregated. Nevertheless, within this diversity, a place and its inhabitants are able to build a relationship. It is simultaneously "near and distant" (Lefebvre, 2003, p133). "Sociological or ecological" segregation instead do not embody this relationship (Lefebvre, 2003; Lefebvre, 1996, p. 140) consequently, the heterotopy is grounded on the idea of "spatial practice;" they are not a projection, or representation of an ideal environment (Lefebvre 2014). The heterotopy, thereby, is perceptible with the five senses which ensures a certain degree of social cohesion and continuity (Brenner et al., 2012; Lefebvre, 1992)

In the same vein, it is important to mention the work of the artist Gordon Matta-Clark. At that time, Gordon Matta-Clark, as Lefebvre and Foucault, was investigating the static, functionally specialized built environment and its inhabitants' anxiety. In fact, Matta-Clark's projects challenged the antagonism between the need for boundaries and the need for their alteration. By creating simple cuts in buildings, which were conventionally preconditioned by a spatial specialization, Matta-Clark produced an alternate mode of behaviour and complexity. The observer or visitors, thereby, would engage with the world in an alternate way. These suggested an experience and thereby inhabitation of the space that was diverse from the already known and self-defined possibilities. For example, *Conical Intersect* (1975) in Paris intended to have a liberating function in regards of a typical French bourgeois interior. The artist made a tornado-shaped hole inclined of 45 degrees to exit through the roof. The object of this work of art was 17th-century building. It stood beside the Roger and Piano's Centre Georges Pompidou, which was, then under construction. Additionally, it was a manifesto of Clark's critique to the urban gentrification. Clark named it as the "son of lumiere" experiment (Diserens 2003; Lee 2000; Sussman 2007; Walker 2011).

In a recent critique conducted by Harvey (2002) on the Foucault's (1984) and Lefebvre's (2003; 1996) notions of "heterotopia," the author shows their excessive abstraction, almost banal multidisciplinarity (e.g. Disneyland, and the cemetery) (Hetherington, 1997). Harvey described it as *"an eclectic mess of heterogeneous and different spaces within which anything is different."* (2002, p.184) This fragmentation may induce the expulsion of these environments and its inhabitants from the context. The two notions, thereby, did not provide information about how a "heterotopia" may be constructed. The more recent edited volume Heterotopia and the City (Dehaene and De Cauter 2008) abundantly reiterated this lack of consistency in Foucault's notion of "heterotopia." On the one hand, the different contributions confirm the slippery character of the term "heterotopia." For example, Heidi Sohn investigates the medical and biological

contexts from which Foucault borrowed the term heterotopia. Christine Boyer reveals the parallels between the work of Rem Koolhaas/Elias Zenghelis and Foucault on "heterotopia," whereas Lieven De Cauter and Michiel Dehaene find the categorisation of space in ancient Greek cities between public and private as a system for untangling the concept of "heterotopia." In doing this, the two authors shadow Hannah Arendt's process in the formulation of her theory of political action. In our contemporary world, everything seems to present heterotopian traits. On the other hand, the volume strengthens the interrelation between cultural, social and spatial phenomena, which are embodied in the notions of "heterotopia" (Dehaene and De Cauter 2008). This is later confirmed by the critical analysis of the case studies. Harvey (2002), therefore, introduces the work of Hetherington (1997) as a more consistent contribution.

In his book *The Badlands of Modernity* (1997), Hetherington reports some 18th-19th-century examples of "heterotopia" such as the Palais Royal in Paris. It was built in 1629 as the residence of the Cardinal Richelieu. It was a place of prestige for Paris citizens who wanted to be part of the cultural elite of the city. After the 1789 French Revolution, the Palais Royal became the place of major social changes. It became the space of margin for the emerging bourgeois class. The term margin does not frame a place on the edge, while it indicates a "place of traffic," an unbounded and blurred environment (Hetherington, 1997, p.27; Franck and Stevens 2007). From this, the author refines its notion, which has a clear connection with Matta-Clark's works. The "heterotopia" becomes the setting in which an alternate mode of social ordering is performed as, an alternative way of thinking and making things, and thereby it exists only in relation to settings that are more conventional. It does not suggest the social order, although the heterotopia proposes a stage in which alternate modes of social ordering can happen (Hetherington 1997, Franck and Stevens 2007). This fosters the unity of differences (Hetherington, 1997; Lefebvre, 2003). This is also the meaning attributed to the "heterotopia" in this study.

Section 3: The Architecture of the "Open City:" The Open Type

The 1960s Jane Jacobs' critique on zoning and single-use development outlined the concept of "open city" (Sennett 2006; Jacobs, 1961). The analysis of the "Great American Cities" allowed the author to reveal unexpected results. These were able to promote innovation and discovery. Jacobs could later frame the notion of "open city," and address unconventional strategies for urban development. The "open city," as the result of a process in which inhabitants are active contributors, became a medium to synthesise an urban "open system" (Sennett 2006) and to accommodate an "open society" (Popper, 1945). This notion differs from Kostof's historical perspective (1992). He linked the "open city" to the beginning of the capitalist system in the 17th century. The land value and disposition changed so the enclosed urban edges lost their role. Despite the different views that Jacobs and Rossi had on the notion of the city, their views instead overlap when the collective human agency is acknowledged in the making of the city and thereby of architecture (Rossi, 1982).

To return with Rossi's analogy of a city as a work of art, I can now specifically refer to the 1989 book by Umberto Eco, *The Open Work*. For Eco, the openness and closedness that differentiate a work of art from any other object lie in three main points. First, they continuously generate new relationship with the audience. Second, this allows an artwork to produce multiple interpretational perspectives in the audience. Third, it is the intent not the finished nature of the artwork that triggers the audience's contribution in its completion. In Eco's words:

> Thus his comprehension of the original artefacts is always modified by his particular and individual perspective. In fact, the form of the work of art gains its aesthetic validity precisely in proportion to the number of different perspectives from which it can be viewed and understood. These give it a wealth of different

resonances and echoes without impairing its original essence. A road traffic sign on the other hand, can be viewed in only one sense and if this is transfigured into some fantastic meaning by an imaginative driver it merely ceases to be that particular traffic sign with a particular meaning. A work of art therefore is a corn-piece and closed from its uniqueness as a balanced organic whole, while at the same time constituting an open object on account of its susceptibility to countless different interpretations which do not impinge on its alterable specificity. Hence, every reception of a work of art is both an interpretation and a performance of it because in every reception the work takes on a fresh perspective for itself... In fact, rather than submit to the "openness" as an inescapable element of artistic interpretation he subsumes it into a positive aspect of his production recasting the work so as to expose it to the maximum possible "opening…" We have, therefore, seen that "open" works insofar as they are in movement are characterised by the invitation to make the work together with the author and that on a wider level there exist works which, though organically completed, are open to continuous generation of internal relations which the addressee must uncover and select in his act of perceiving the totality of incoming stimuli. Every work of art even though it is produced by following an explicit or implicit poetics of necessity is effectively open to a virtually unlimited range of possible readings each of which causes the work to acquire new vitality in terms of one particular taste or perspective or personal performance (1989, p. 3, 5, 21).

Eco, therefore, recognises a continuity between the work of the artist and his/her audience. This is pretty much in the same vein with Jacobs's (1961) and Rossi's (1982) arguments about the city. In this regards, Colin Rowe and Fred Koetter's (1978, p.49) Collage City proves an equal theory surrounding the necessity of a city, which embeds the "nostalgia for the future" and the "theatre of memories." The two authors propose the technique of collage that allows designers to layer a coexisting set of data about

a place. This would produce a map, which is not about clarity although it is didactic. The lack of clarity is peculiar to the city and thereby generates innovation from density. In this, the works of architecture present a certain degree of continuity with the social context (Rowe and Koetter, 1978).

The research of innovation into the density of the city was largely embraced by Rem Koolhaas in later years. In particular, New York was Koolhaas's object of interest. His retroactive manifesto on Manhattanism (Koolhaas, 1994) recognised New York as the archetype of a new city. It paradoxically combined the permanence of the most frivolous architectural elements and the ephemeral metabolism of the metropolis. In this rivalry, urban designers and architects loosened their authorship. The unconscious architectural and urban production that resulted was more charming. The metropolis was the victor in which the inhabitants always came out with a peculiar solution (Koolhaas, 1994; Koolhaas, 1995).

Over recent years, Sennett more precisely framed the notion of "open city" as an urban strategy by referring to the work of Jacobs (1961). The "open city" is not a consequence of a vision, but comprehension of the reality (GSD Harvard, 2016). The "open city" generates a constant experience of "displacement," and growth (Sennett, 2004). This city is complex and can self-organise itself; it is "dialogical" so enables exchanges. This means that it is the result of a process not of planning. The "open city" is "economically synchronous." The economic diversity is a consequence of the interaction among incoherencies that happens at the same time. The "open city" is "politically to the left of its nation-state." Laws can address the openness or closeness of the urban system (GSD Harvard, 2017, Sennett, 2018).

Furthermore, Sennett translated these characteristics into four architectural or urban principles (Sennett, 2018; Sennett, 2017; Sennett, 2008; Sennett, 2006). The first is the

"passage of territories." Boundaries are both resistant and porous, as cell membranes. Boundaries, thereby, become borders. They are not any more the edge in which things end although they are the edge in which people interact. Sennett refers to Van Eyck's works such as children's playgrounds. Second is the "incomplete form." Architectural and urban objects are perceived as incomplete also from a volumetric or geometric perspective. The lack of a specific and particular initial configuration supports the porosity of a built environment. However, the form's unfinished appearance may have a negative impact. Consequently, a work of architecture or urban design should behave as DNA, which has different forms in different contexts: a type. It guarantees a continuity with the context as well as with alternate urban and architectural evolutions. Thirdly is the "development of narratives." These are architectural and urban stages that allow encounters, interactions, and so, narratives that distinguish and modify themselves. This unfolds a particular work of urban design or architecture from its originality to a theatre of everyday life. Finally, Sennett delineates the "democracy of spaces." This is the democratic space as a physical experience and participation not in a political or legal sense. It fosters citizens' appropriation and participation in the thinking making and living of a work of urban design or architecture. (e.g. Nehru Place in Delhi, India – The "Delhi silicon alley") (Sennett, 2018; Sennett, 2017; Sennett, 2008; Sennett, 2006).

Nevertheless, Sennett's writings showed a lack of examples of "open systems" on the architectural scale. In *Building and Dwelling, Ethics for the City* (Sennett, 2018, p.233), he refers to the "type-form" as a dynamic inception, which "sets the terms for making a family of possible objects." The author, however, cites the Barcelona grid plan as an exemplifying case. This is complemented by the historian Esra Ackan's (2018) work on open architectures. In her book *Open Architecture* (Akcan, 2018), the author provides us with a number of precedents. On the one hand, speculative projects such as Price's Fun Palace (1961-65), Tange's Tokyo Bay Project (1960), Friedman's

Mobile Architecture (1956) embodied notions of flexibility and adaptability of forms against traditional and centralised systems, on the other hand, collective projects such as the IBA-1984/87 in Berlin reveal other facets of an open architecture underpinned by theories of collectivity and collaborations, a multiplicity of meaning, democracy and plurality, expansion of human rights and social citizenship, and transnational solidarity. Ackan syntheses this as *"The translation of a new ethics of hospitality into architecture. Open Architecture is predicated on the welcoming of a distinctively other mind or group of minds into the process of architectural design"* (Akcan, 2018, p.10). It welcomes an alternate group of minds into the thinking, making and thereby living of a work of architecture. The inhabitants, therefore, are subjects rather than a passive object (Akcan, 2018). While Akan (2018, p.25) focuses on housing and "latent forms of open architecture", this thesis is more concerned with types of open architecture and older adults' long-term care facilities such as nursing homes. According to Rossi's *The Architecture of the City* (1982), 'open types/typologies' are prior to open forms of architecture.

The 'open type,' therefore, embeds Sennett's theory on open systems (Sennett, 2018) in order to translate mutations of the contemporary culture and its challenges into architecture. The tool for translating the contemporary culture's articulation is the typology/type, which frames the constant logical principles (Picon, 1988; Moneo, 2010; Rossi, 1982; Moneo, 1978). As also noted by Ackan (2018) the 'open type' implies the adoption of a new ethic. It is grounded, however, into the Aristotelian notion of ethics, and thereby it affects professionals as well as their inhabitants (Curzer, 2012; Smith, 2017).

In this particular study, the 'open type' therefore, proposes an alternate order of older adults' long-term care facilities, which are usually structured around efficiency, consistency and hierarchical decision-making (Brownie and Nancarrow 2013; Dewar

and Nolan, 2012). It is a multidisciplinary, collaborative and socially inclusive order (Borasi and Zardini 2012; Harvey 2002; Hetherington 1997; Foucault 1984).

Whereas the 21st century, being strongly affected by the proliferation of zoning, and the affirmation of global capitalisation permeated by a new demographic structure delineate a knowledge gap, they may provide the basis for a new notion of type (Moneo, 1978). This interdisciplinary research apparatus crystallises it. The generation of new types represents the most intense moment in architecture as a discipline. However, its danger is the potential for repetition of its principles. This may generate a "frozen mechanism" (Moneo, 1978, p.24). To destigmatise this, we now must put attention on the empirical analysis of the proposed case studies.

REFERENCE LIST

Akcan, E. (2018) *Open Architecture: Migration, Citizenship, and the Urban Renewal of Berlin-Kreuzberg by IBA-1984/87.* Basel: Birkhauser GmbH.

Alexander, C. (1973) *Notes on the Synthesis of Form.* Cambridge (MA): Harvard University Press.

Alexander, C., Ishikawa, S., and Murray S. (1977) *A Pattern Language: Towns, Buildings, Construction.* Oxford: Oxford University Press.

Borasi, G., and Zardini, M. (eds.) (2012) *Imperfect Health: the Medicalisation of Architecture.* Zurich: Lars Muller Publishers.

Borasi, G. (ed.) (2018) *Besides, History: Go Hasegawa, Kersten Geers, David Van Severen*. Montreal (CA): Canadian Centre of Architecture.

Brenner, N., Marcouse, P., and Mayer, M. (eds.) (2012) *Cities for People not for Profit.* London: Routledge.

Brownie, S. and Nancarrow, S. (2013) Effects of Person-Centered Care on Residents and Staff in Aged-Care Facilities: a Systematic Review. *Clinical Interventions in Aging* [on-line], 8, pp. 1-10. DOI: https://doi.org/10.2147/CIA.S38589. [Accessed: 27th October 2016].

Burdett, R., and Sudjic, D. (eds.) (2008) *The Endless City.* London: Phaidon.

Claudel, M., and Ratti, C. (2016) T*he City of Tomorrow: Sensors, Networks, Hackers,*

and the Future of Urban Life (The Future Series). New Haven (CT): Yale University Press.

Curzer, H., J. (2012) *Aristotle and the Virtues.* Oxford: Oxford University Press.

Curtis, W.J.(2009) *Modern Architecture Since 1900.* London: Phaidon.

Dehaene, M. and De Cauter, L. (eds.) (2008) *Heterotopia and the City: Public Space in a Post-Civil Society.* Abingdon: Routledge.

Devis, M. and Monk, D. B. (eds.) (2007) *Dream Worlds of Neoliberalism: Evil Paradise.* New York (NY): The New Press.

Dewar, B. and Nolan, M. (2013) Caring about Caring: Developing a Model to Implement Compassionate Relationship Centred Care in an older People Care Setting. *International Journal of Nursing Studies* [on-line] 50 (9), pp: 1247-1258. DOI: https://doi.org/10.1016/j.ijnurstu.2013.01.008. [Accessed: 27th October 2016].

Diserens, C. (ed.) (2003) *Gordon Matta-Clark.* London: Phaidon.

Eco, U. (1989) *The Open Work.* Cambridge (MA): Harvard University Press.

Foucault, M. (1984) Of Other Space: Utopia and Heterotopias. *Architecture/Mouvement/ Continuite'* [on-line] 5, pp. 46-49. Available at: http://foucault.info/documents/heterotopia/foucault.heterotopia.en.html [Accessed: 15th February 2017].

Franck, K.A., and Stevens, Q. (eds.) (2007) *Loose Space. Possibility and Diversity in Urban Life.* London: Routledge.

Geddes, P. (1915) *Cities in Evolution: an Introduction to the Town Planning Movement and to the Study of Civics.* London: Williams & Norgate.

GSD Harvard (2016) *Richard Sennett: The Open City* [online video] Available at: https://youtu.be/eEx1apBAS9A [Accessed: 1st May 2017].

GSD Harvard (2017) *Richard Sennett: The Open City* [online video] Available at: https://www.youtube.com/watch?v=7PoRrVqJ-FQ [Accessed: 1st November 2017].

Harvey, D. (1985) *The Urbanisation of Capital: Studies in the History and Capital Urbanisation.* Baltimore (MD): Johns Hopkins University Press.

Harvey, D. (2001) *Space of Capital. Towards A Critical Geography.* Edinburgh: Edinburgh University Press.

Harvey, D. (2002) *Spaces of Hopes.* Edinburgh: University of Edinburgh Press.

Harvey, D., and Herod, A. (2009) *Social Justice and the City.* Athens (GE): University of Georgia Press.

Hasegawa, G. (2011) Thinking, Making Architecture, Living. Tokyo: Lixil.

Hetherington, K. (1997) *The Badlands of Modernity: Heterotopia and Social Ordering.* London: Routledge.

Huber, A (2008) *New Approaches to Housing for the Second Half of Life (Living Concepts).* Basel: Birkhauser GmbH.

Jacobs, J. (1961) *The Death and the Life of the Great American Cities.* New York (NY): Random House.

Jacobs, J. (1969) *The Economy of Cities.* New York (NY): Random House.

Koolhaas, R. (1994) *Delirious New York: A Retroactive Manifesto for Manhattan*. New York (NY): The Monacelli Press.

Koolhaas, R. and Mau, B. (1995) *S, M, L, XL: OMA.* New York (NY): The Monacelli Press.

Kostof, S. (1992) *The City Assembled.* London: Thames and Hudson.

Landi, D. (2017) *Cities "on the Run."* Studio Magazine Issue n. 12, pp. 20-29.

Lee, P. M. (2000) *Object to Be Destroyed. The Work of Gordon Matta-Clark.* Cambridge (MA): MIT Press.

Lefebvre, H.(1992) *The Production of Space.* New Jersey (NJ): Wiley.

Lefebvre, H. (1996) *Writing on Cities.* Oxford: Blackwell Publishing.

Lefebvre, H. (2003) *The Urban Revolution.* Minneapolis (MN): University of Minnesota Press.

Lefebvre, H. (2014) *Toward An Architecture of Enjoyment.* Minneapolis (MN): University of Minnesota Press.

Markus, T. A. (1993) *Building and Power.* London: Routledge.

Moneo, R. (1978) On Typologies. *Opposition* Issue n. 13, pp. 24-45.

Moneo, R. (2010) *Remarks on 21 Works.* New York (NY): Monicelli Press.

Picon, A. (1988) *French Architects and Engineers.* Cambridge: University of Cambridge Press.

Picon, A. (2010) *Digital Culture in Architecture. An Introduction for the Design Profession.* Basel: Birkhauser GmbH.

Pevsner, N. (1979) *A History of Building Types.* Princeton (NJ): Princeton University Press.

Popper, K. (1945) *The Open Society and Its Enemies.* Princeton (NJ): Princeton University Press.

Ray, N. (2018) *Making and Matching: Towards Shared Cultural Understanding for Students of Architecture.* London: Sage.

Rossi, A. (1982) *The Architecture of the City.* Cambridge (MA): MIT Press.

Rowe, C. (1977) *The Mathematics Of The Ideal Villa And Other Essays.* Cambridge (MA): MIT Press.

Rowe, C., and Koetter, F. (1978) *Collage City.* Cambridge (MA): MIT Press.

Sennett, R. (1970) *The Use of Disorder.* New York (NY): W.W.NORTON AND

COMPANY.

Sennett, R. (1993) *The Conscience of the Eye: The Design and Social Life of Cities.* New York (NY): W.W.NORTON AND COMPANY.

Sennett, R. (1994) *Flesh and Stone. The Body and the City in Western Civilization.* New York (NY): Norton Paperback.

Sennett, R. (2004) *The Fall of Pubic Man.* New York (NY): Penguin Books.

Sennett, R. (2006) The Open City. *LSEcities: London School of Economic Cities* [on-line]. Available at: https://lsecities.net/media/objects/articles/the-open-city/en-gb/ [Accessed: 3rd May 2017].

Sennett, R. (2008) The Open City. In: Burdett, R. and Sudjic, D. (eds.) *The Endless City.* London: Phaidon, pp. 290-297.

Sennett, R. (2017) Edges: Self and City. In: Mostafavi, M. (ed.) T*he Ethics of the Urban: the City and the Space of the Political.* Zurich: Lars Muller Publishers, pp. 261-268.

Sennett, R. (2018) *Building and Dwelling. Ethics of the city.* London: Penguin Books.

Simpson, D. (2015) *Young - Old: Urban Utopia for an Ageing Society.* Zurich: Lars Muller Publisher.

Smith, G. (2017) *A Practical Introduction to Mental Health Ethics.* London: Routledge.

Sussman, E. (ed.) (2007) *Gordon Matta Clark, You Are the Measure.* New Heaven

(CT): Yale University Press.

Tafuri, M. (1976) *Architecture and Utopia. Design and Capitalism Development.* Cambridge (MA): MIT Press.

Walker, S. (2011) *Gordon Matta-Clark: Art, Architecture, and the Attack on Modernism.* London: I.B. Tauris & Co. Ltd.

CHAPTER 3

Constructed Open Types

The purpose of this chapter is to critically describe the case studies and compare their differences. Consequently, the analysis of the three case studies is divided into three parts: "thinking, making and living" (Landi, 2017). They ensure the study continued to preserve parallels with the architectural profession, while remaining grounded within the chosen POE method. These verbs/phrases, central to any design process, strengthen the idea of an architecture that can be properly produced so understood only through them. This section aims to empirically interpret the generative processes and features of Humanitas© Deventer (The Netherlands), The Rudolf© in Helsinki (Finland), and The Gojikara Mura© in Nagakute (Japan) in order to frame the distinctive aspects of a new notion of architectural types: the 'open type.'

Section 1: The Humanitas© Settings in Deventer (The Netherlands)

Architect: Wim and Daniel Knuppel Architecten

Year: 1964

Location: Deventer, The Netherlands

Typology: Nursing Home - Figure 18.

Interview N.	Interview Type	Business/Profession	Role
1	Business/Management	Housing Provider/ Care Provider	Manager
4	Business	Housing Provider/ Care Provider	Staff
0	Design	Architect	/
4 and 4	Users	Residents	Students and Older Adults

This section critically investigates The Humanitas©, a nursing home situated in Deventer, the Netherlands. It proposes and embodies an innovative response to the requirement of an ageing population, where the number of people with dementia is expected to rise. In the Netherlands, the design of these facilities has to fit with the spatial and accessibility requirements of the National Building Code (i.e. Design for All/
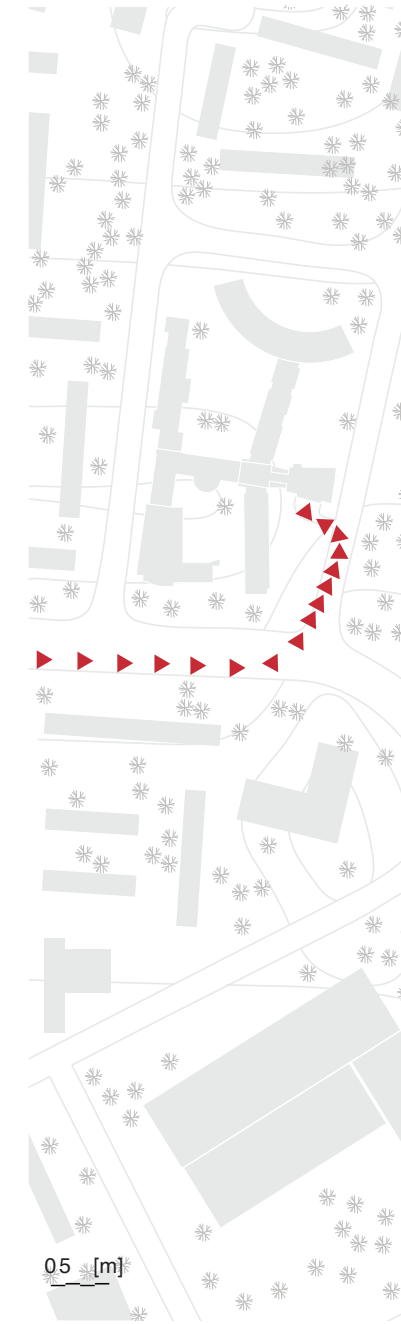
Figure 18. The Humanitas' Serial Vision. It Illustrates the Journey from the Closest Tram/Bus Station to the Main Entrance of the Nursing Home © Davide Landi

Bouwen voor iedereen: Towards a Barrier-free Environment for Everyone). Clients are also able to ask for additional requirements (i.e. Dutch NEN standards) or guidelines including suggestions for the design of spaces occupied by people with dementia. These guidelines are not official governmental or municipal regulations (Designer Interview, 2017, a). Nevertheless, the Netherlands has adopted the "Senior Citizen Label", which is a quality certificate only awarded to those new housing developments which meet different design requirements, several of which are intended to ensure that the older person should not have to leave their dwelling when disability occurs (European Union, 2015, a).

For example, the standard room/apartment sizes for facilities which host an increasing ageing population is 35 sqm and the communal space for caregivers is 55 – 65 sqm per bed. These minimum spatial requirements were increased since 1990; this drove the refurbishments (i.e. many single rooms were joined together in order to generate a bigger apartment) or the closure of the oldest facilities (Van der Voordt, 1997). Additionally, the process of moving into older adults' care facilities is a consequence of the substitution policy introduced by the Dutch Government in the 1960s. The substitution policy supported the migration process of different age categories, in which houses left by older adults entered into care homes, nursing homes, etc. could be purchased and were therefore occupied by younger families. It underwent many adjustments during the years in order to properly answer to the continuously changing economic and demographic settings of the Dutch society (Manager Interview, 2017, a). However, the existing social and healthcare models, and their architectural correlates have shown their character of economic and social unfeasibility and unsustainability. In recent years, traditional settings, therefore, have embraced innovative care models.

The Humanitas© Deventer, for example, is a Dutch Functionalist building built in 1964 as a traditional nursing home which since 2012 has adopted a radically transformed

care model. Located in Deventer, a town of the Salland region of the Dutch province of Overijssel, Deventer hosts the Saxion University of Applied Sciences, so the rate of the young population is quite high (Deventer, 2017). The Humanitas© stands on the northern outskirts of the town. It is five storeys above the ground and is an institutional building. The closest bus stations are along Lebuinuslaan, just opposite the facility (65 meters from the main entrance). The Humanitas© is surrounded by a private lawn which has different functions (Designer Interview, 2017, a). The urban plot is defined by a park with a lake on the east side, and by a residential block on the south, west and north sides. All the other streets which surround the Humanitas© are vehicle-accessible but, except Lebuinuslaan, they are mainly used by pedestrians and cyclists. However, Lebuinuslaan has paved sidewalks (1.5 meters) and cycle paths - Figure 19.

In 2012, after the decision of the Dutch Government to reduce economic support to older adults' care, the Humanitas CEO, Gea Sijpkes, had to dismiss a relevant number of professional caregivers. Consequently, the organisation was no longer able to provide the qualitative care service as before. At this point, the CEO decided to get closer to academia and research in order to develop a new care model based on the social-relational reciprocity and respect. This was a care model based on the quality of life and wellbeing of residents who are assisted in order to maintain independence for what they can still do (Manager Interview, 2017, a; WilliammumfordUTS, 2016). From this, the section aims to describe the physical settings and spaces of the facility as a transposition of an innovative care model, and how these settings and spaces are used by the residents, volunteers and staff. The description is untangled through three themes. They are (a) Thinking; (b) Making; and (c) Living.

Thinking

The Humanitas© in Deventer is a nursing home which was designed by the Archi-

45 m — Park

65 m — Bus Stop

90 m — Bus Stop

120 m — Market

220 m — Shopping Area

320 m — Pharmacy
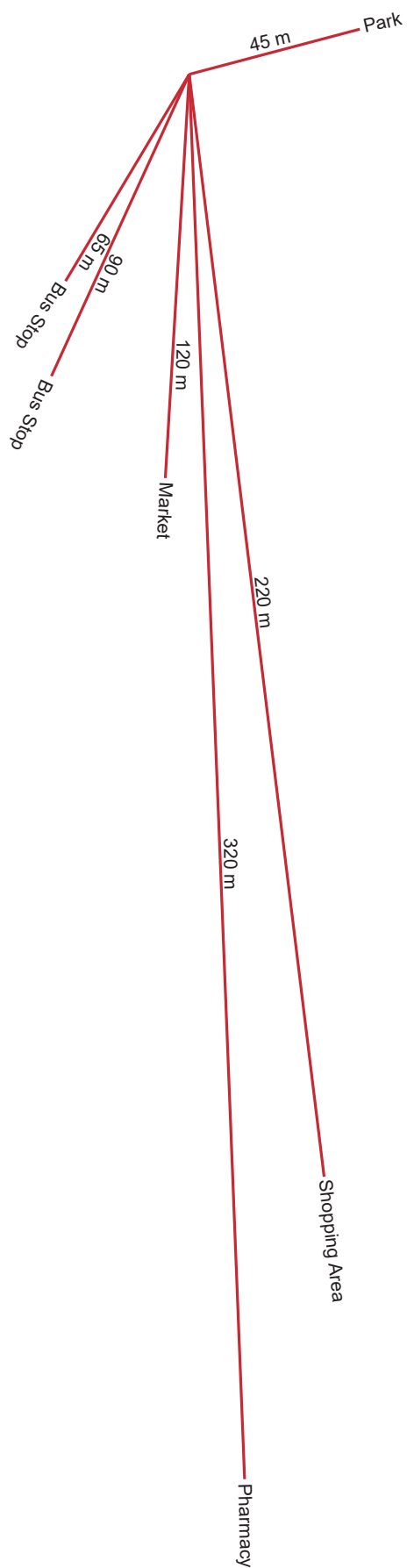
Figure 19. The Humanitas' Urban Distances. Quantification of the Distances Between the Case Study and the Main Urban Features such as Bus/Tram Stations, Churches, Shopping Area, Markets, etc. This Defines the Scale of the Community © Davide Landi

tectenbureau Wim Knuppel. The architects who worked on this project were Wim Knuppel and his son Daniel Knuppel. The practice adhered to the Dutch modern movement, in particular, the functionalists who developed in the early 20th century (Designer Interview, 2017, a). The functionalism movement put emphasis on functions and the use of technology as the two generative dimensions of forms and thereby buildings (Curtis, 2009). It was the application of technocratic ideology to the built environment. It celebrated the machine and its aesthetics. This architectural movement presented stronger peculiar characteristics, which were internationally shared. They translated some of the points presented at the declaration at the 1928 Congres Internationaux de l'Architecture Moderne (CIAM) which evidenced the focus on new materials, standardisation and internationalisation as a synonymous of a new economic model, and the idea of buildings as an obligation toward the society. It was the first international meeting in which some of the leading European architects such as Le Corbusier and Gropius discussed the interrelationship between modern architecture and town planning (Curtis, 2009). Despite this international perspective, there were national as well as regional differences. In particular, the Nieuwe Bouwen was the Dutch response to the international functionalist movement. It lasted for two decades (1920-1940) with strong repercussions on the following generation of architects such as Aldo Van Eyck and Wim Knuppel. The rise of the Nieuwe Bouwen was the result of the action of two main Dutch architects' associations: the "De8" and the "Opbouw." The first was founded in 1927 in Amsterdam, while the second was founded in 1920 in Rotterdam. Even if the two associations embraced a series of different opinions, their manifesto was published in the magazine i10. It contained common views such as the role of architects in society and what aesthetics in architecture should be. Surprisingly, it had few shared points with the CIAM's La Sarraz declaration (Mattie, and Derwig, 1995). In De8's words:

The construction of beautiful buildings is not ruled out but is better to build

an ugly and functional building than to erect show-piece architecture for bad ground plans. (1995, p. 5).

The external form was less relevant than the practical use of a building. For the Dutch functionalist architects, the functionalist materials were brick, glass, concrete and steel. The architectural composition emphasised the horizontal dimension that was interrupted by vertical elements such as internal or external staircases. The building proposed the abundant use of balconies. They were of the size of a single person with a concrete plastered or steel balustrade or railing. The details were essential while extremely refined. This was also proposed in the interior of buildings. The finishing of walls was smooth in order to be easily cleaned. Architects designed a plan with spacious rooms. This was coherent with the idea of an architecture fostering hygiene, natural light, fresh air, and space for collective and recreating activities with a positive aspect on the well-being of inhabitants. These two generative dimensions were also the tools for the analysis of buildings (Rossi, 1982).

In 2012, the building conceived by the Architectenbureau Wim Knuppel was presenting its own limitations. The Humanitas, the association which manages the nursing home, wanted to create a forward-looking care model based on these three keywords:

_Love: loving care;
_Together: as a human being is fundamental being in meaningful relationships;
_Positive: looking for a solution instead of a problem (The Humanitas Deventer, 2017).

This care model starts with an awareness of a shared cultural background which is grounded in the Dutch lower/middle working class (Manager Interview, 2017, a). Additionally, this care model should be efficiently able to optimise the use of the available economic and social resources. It is an adaptable care model, tailored to the

residents' requirements. The care model, thereby, is also based on the quality of life and wellbeing of residents who are then assisted to maintain independence (Manager Interview, 2017, a; WilliammumfordUTS, 2016). Therefore, a partnership with the TIALS, the school of Business and Sociology of Tilburg University and Eindhoven University of Technology, and the contribution of Professor Theo Poiesz (TIALS) was central in this process. It allowed the Humanitas© Deventer to develop a methodology to assess the residents' profiles based on three simple but fundamental questions:

_ Who were you?
_ Who you are?
_ Who will you be?

Instead of the more than 100 questions adopted by conventional nursing homes, these three questions delineate the residents' profiles according to their motivation, capacity and opportunity, and thereby they characterise their care. However, the new building regulation for older adults' long-term care facility changed. For example, the minimum size of rooms and apartments was raised to 35 Sqm. Therefore, the existing building did not fulfil any more the minimum requirements of the new building regulations. It underwent a refurbishment process. The few economic resources were used for joining two adjacent single rooms in order to satisfy the minimum spatial requirements, while social/communal spaces were maximised. These were social spaces that increase the possibilities of encounters. They have a strategic function in informing The Humanitas©' communal life, which positively affects residents' wellbeing (Manger Interview, 2017, a). Even if these adjustments were able to acceptably match with the new care model's needs and the new building regulations, a few apartments/rooms were left unoccupied. They were still under the minimum spatial requirements. Aware of the Dutch Government's incapacity for providing affordable student accommodations, The Humanitas© decided to open its doors to the university students. This initiative

was the genesis for making the new care model effective. The spare apartments were occupied by the students and the new care concept could be emphasised.

In detail, the number of students living in The Humanitas© is six: a ratio of approximately one to every 25 older residents. The admission process is quite simple. The students contact the facility through Facebook. After a brief interview with the manager and other few staff members, the students are taken around the nursing home in order to understand how they interact with older residents. The only requirement is that students must not study in a nursing or medical school. Students, therefore, help them in creating an enjoyable and natural environment, while it is not underpinned by a professional approach (Manger Interview, 2017, a; WilliammumfordUTS, 2016). Once selected, the students are asked to attend a course in first aid, fire security and other panic situations (The Humanitas Deventer, 2017).

Making

The nursing home was completed in 1964, before the first liberalisation of the Dutch real estate, thus before the beginning of the building speculations in the real estate market. Therefore, the construction materials and technologies were good and that is why the building is still well preserved (Designer Interview, 2017, a). In the first decade of the 2000s, the nursing home was refurbished according to the new building regulations for older adults' care facilities.

The building has a footprint of 9,240 sqm. From the outside, The Humanitas© appears to be a large institutional building made of bricks and concrete. However, the main bulk of the building matches with the scale of typical Dutch residential blocks present in the surrounding, prevalently residential, area. The principal outside shopping area is sited opposite to the nursing home, in an affordable distance (around 220 meters);

the pharmacy is placed inside the same complex. They are central to older residents' urban experience mainly done on foot (Professional Caregiver Interview, 2017, a). The adjacent piazza hosts the local market every Thursday morning. The university campus is ten minutes by bike from The Humanitas©. Just before The Humanitas©' main entrance, there is a bicycle and 'Dutch tandems' park for employees, residents and volunteers - Figure 20.

The nursing home was built in the 1960s, and thereby it does not match with many of the more recent age and dementia-friendly design principles. Each floor has a very long corridor, which means long walks for professional caregivers. Consequently, the refurbishment of the building introduced collective spaces for parties, meetings, etc. on each floor. They have been introduced at the beginning, in the middle and at the end of the corridors that link the apartments - Figure 21. The communal spaces have a double function of reducing the lengths of corridors and maximising the possibilities of interaction between the residents, professional caregivers and volunteers as also confirmed by the interviews (Professional Caregiver Interview, 2017, a; Resident Interview, 2017, a). They are furnished with a dining table, a small kitchen with comfortable seats, a small electric moped park and battery recharge point - Figure 22. The social spaces are maximised - Figure 23. The vertical circulation happens through staircases and elevator shafts ("Hard areas," McGlynn, et al., 1985) which are concentrated in the central wing. Nevertheless, a common view amongst interviewees was that the reduced number of elevators should be increased. In fact, during the "rush hours" (after the meals) long queues are generated (Professional Caregiver Interview, 2017, a). For fire safety reasons, staircases are also placed at the end of each corridor - Figure 24.

Additionally, the central wing of the ground floor was converted into an interior "shopping boulevard" - Figure 25. There, it is possible to find: a supermarket, a café/
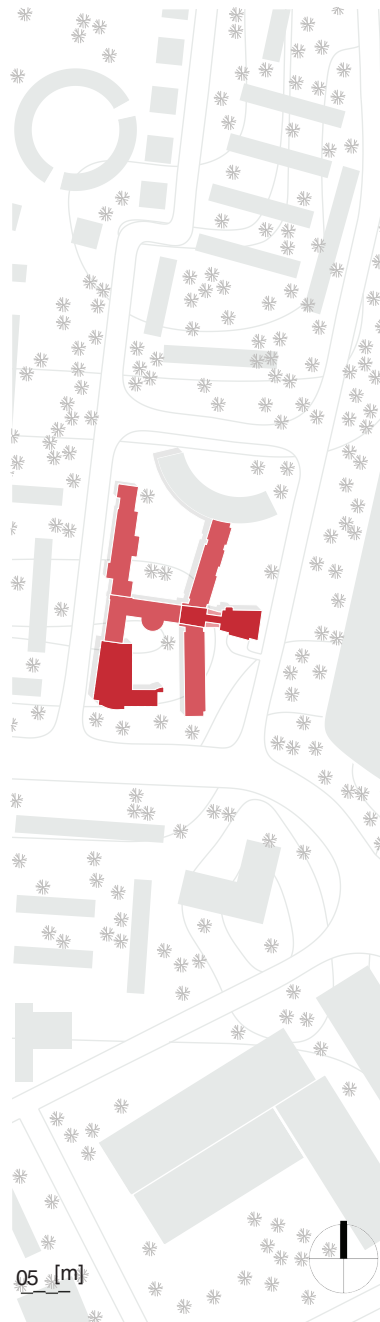
Figure 20. The Humanitas'
Site Plan © Davide Landi
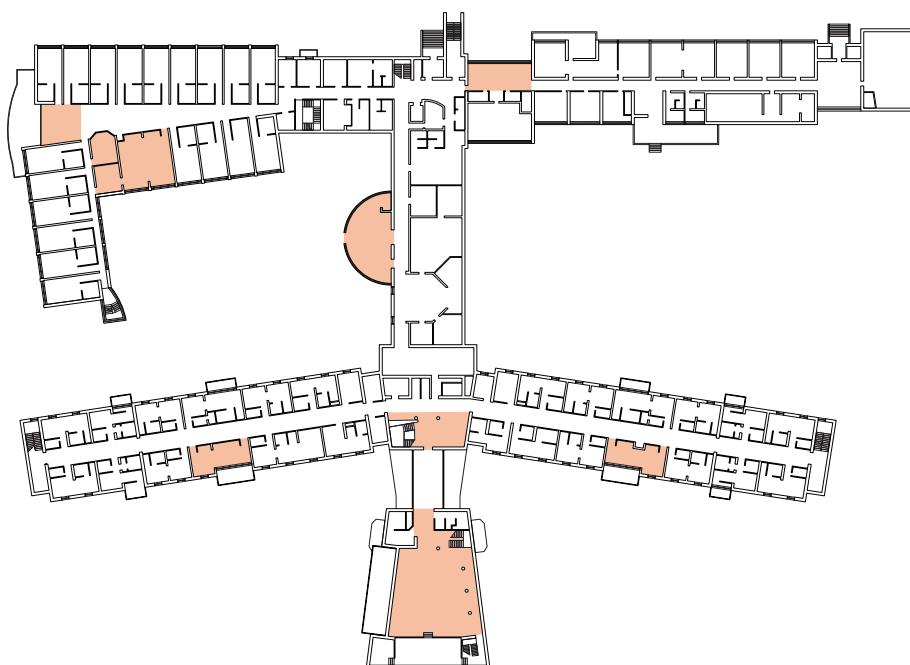
Figure 21. The Humanitas' Communal Areas © Davide Landi

Figure 22. View of an Electric Scooters Park © Davide Landi
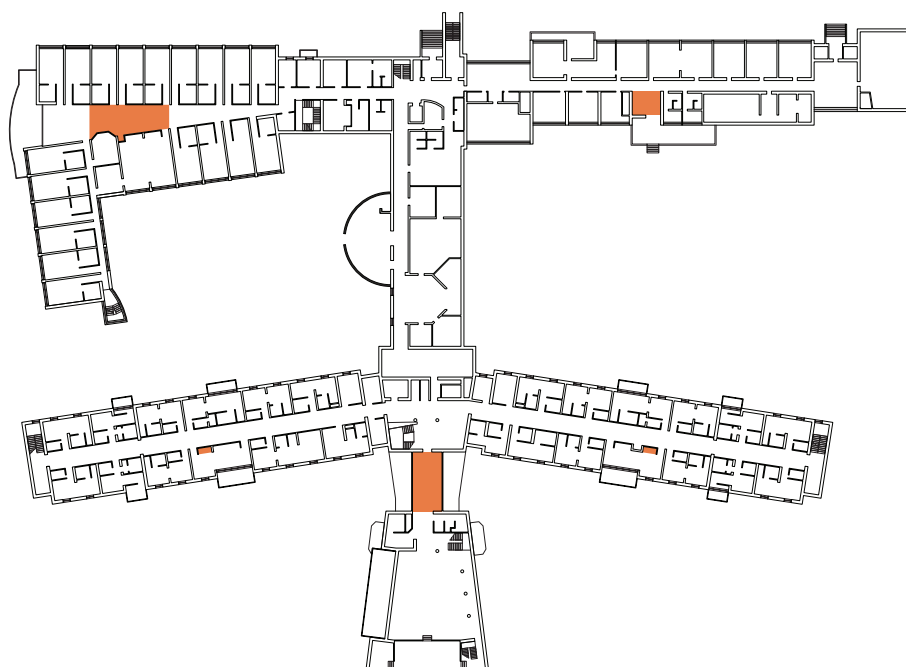
Figure 23. The Humanitas' Electric Scooters Parks © Davide Landi

Figure 24. The Humanitas' Hard Areas © Davide Landi

Figure 25. View of the Internal Shopping Area with the Market,
the Library, Hairdresser and Communal Space© Davide Landi

pub, a hairdresser, a library, a SPA, a beautician and a physiotherapist - Figure 26. Aligned with the idea of being open to the community, the north-west wing has been opened up to external local entrepreneurs such as a tattoo removalist who rents a lab; or social enterprise which provides social support to Deventer's citizens. These represent additional incomes for The Humanitas© (Manager Interview, 2017, a) - Figure 27. It confirms a certain adaptability and resilience of the spaces such as the three meters-wide corridors. In facts, they are very often used as an electric moped or wheelchair park. Another relevant interior communal space is the multipurpose room. It is a double height room where meals are served, or it is used for hosting events. The privacy gradient (Cullen, 1971) both at the scale of the whole building and single apartments have a linear sequence. Residents and visitors access The Humanitas© through the more public spaces such as communal/collective areas, reception/café, corridors, etc. They are then driven to the more private spaces such as the apartments. These have an average surface of 38.5 Sqm - Figure 28. Concerns, however, were expressed about the repetitive nature of apartment surfaces and layouts which underlines the institutional character of The Humanitas© (Resident Interview, 2017, a). Their layouts are very simple and compact, consisting of an entrance which acts as a filter between the public corridors and the interior, more private space. It acts also as a spatial connection element between the living room, the kitchen and the bathroom. The bedroom is placed opposite the living room. Both of them are thereby physically (no division wall) and visually connected. It minimises the use of corridors inside the private units - Figure 29.

Furthermore, the building is surrounded by a garden which has two different characters that are also due to the nursing home plan. On the southern part, there is the "formal garden" - Figure 30. It is used for recreational and collective activities during spring and summer. Inhabitants can access it through all communal interior spaces placed on the ground floor. On the northern part, there is the "vegetable garden" - Figure
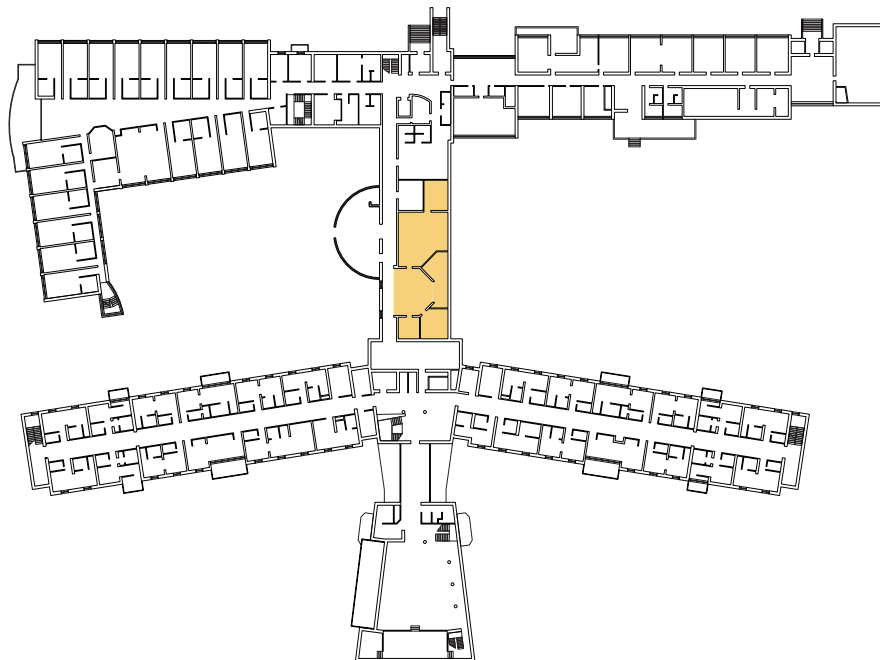
Figure 26. The Humanitas' Shopping Area © Davide Landi
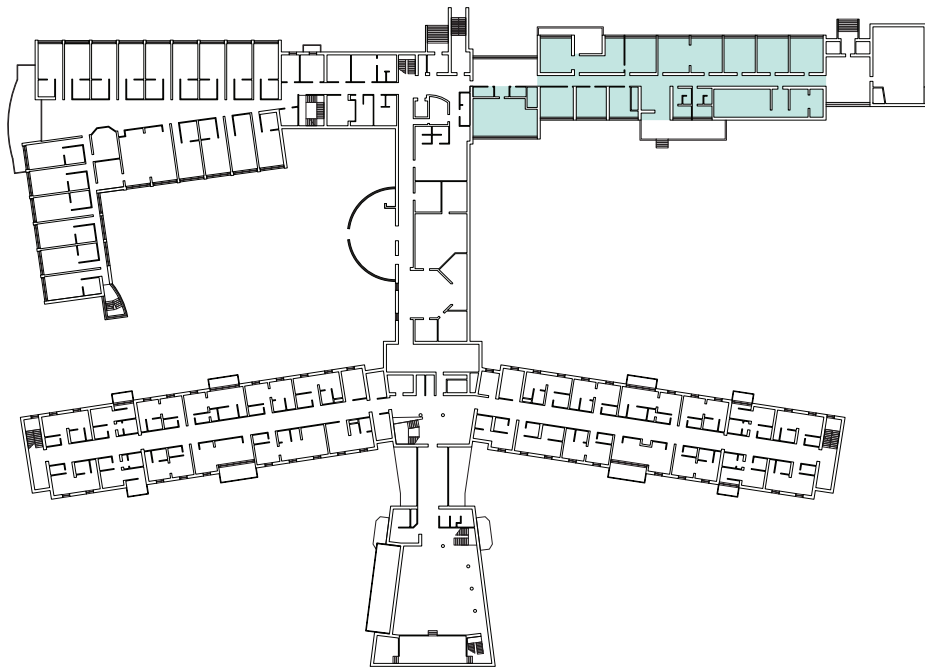
Figure 27. The Humanitas' Entrepreneurs' Hub © Davide Landi
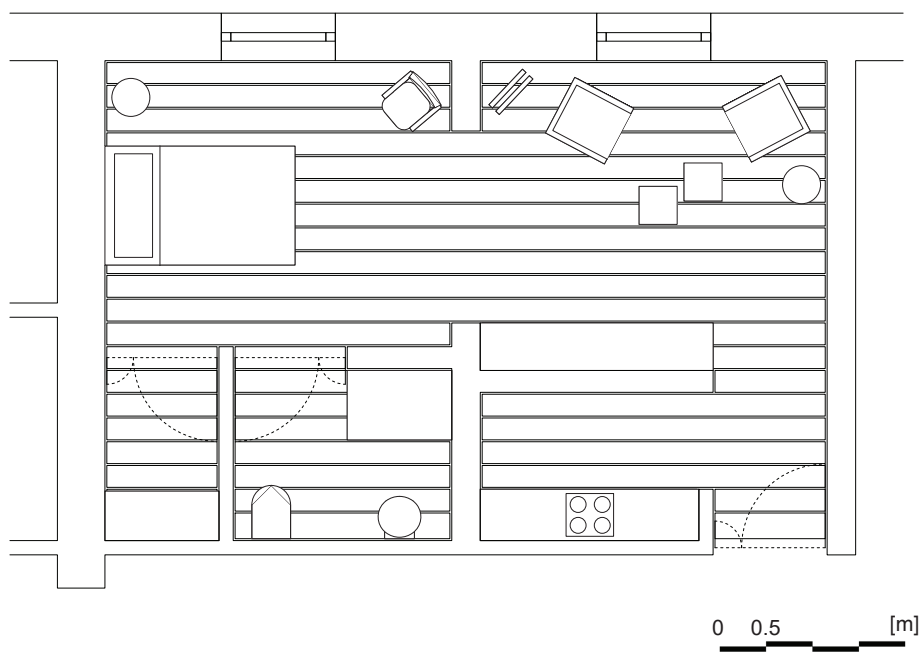
Figure 28. Standard 1-Room Apartment Floor Plan © Davide Landi

0   0.5   [m]

Figure 29. View of a Living Room of a Standard 1-Room Apartment © Davide Landi

31. It was started a few years ago by a professional gardener. Now, it is managed collectively by the residents, both older adults and students and volunteers. The grown vegetables are used for preparing the meals in the nursing home or sold in the local market - Figure 32. After gaining private research funding, one of the students has started a research project. It attempts to evaluate the social benefits of the collaboration between older adults and youngsters in the plantation of vegetables - Figure 33. The student purchased a container in which was placed the research lab. The container is sited in one of the corners of the vegetable garden. All these outdoor environments have benches, a green pergola, a bird house and seats, so residents can stop and admire the gardens or watch the world goes by. Gardens, therefore, are fundamental elements for the social life, and thereby residents suggest increasing the number of outdoor activities (Resident Interview, 2017, a). Nevertheless, the surrounding garden is not easily accessible for residents living on the upper floors, and thereby older adults with more serious physical and mental disabilities live in apartments on the ground floor (Resident Interview, 2017, a; The Humanitas Deventer, 2017) – Figure 34.

Abundant natural light is provided inside the apartment units through big windows in their living rooms. This helps the residents in the perception of the passage of time and preserving a visual connection with the outside when they cannot physically participate. Most of the corridors are characterised by big transparent openings, which reduce the claustrophobic perception of the linear space. Artificial light, when required, simulates the intensity and colour of the sunlight. The double height winter garden in the south-west wing has skylights, and thereby zenithal natural light is provided in this part of the nursing home (Professional Caregiver Interview, 2017, a) - Figure 35. Furthermore, this wing has the highest percentage of residents with dementia. Here, all the apartments are directly connected to a social/collective central space furnished with sofas, dining table, chairs, and a small kitchen. There are no corridors and the number of residents on each floor is lower than on other wings. Residents, volunteers

Figure 30. View of the Formal Garden © Davide Landi

Figure 31. View of the Vegetable Garden Manged by the Residents © Davide Landi
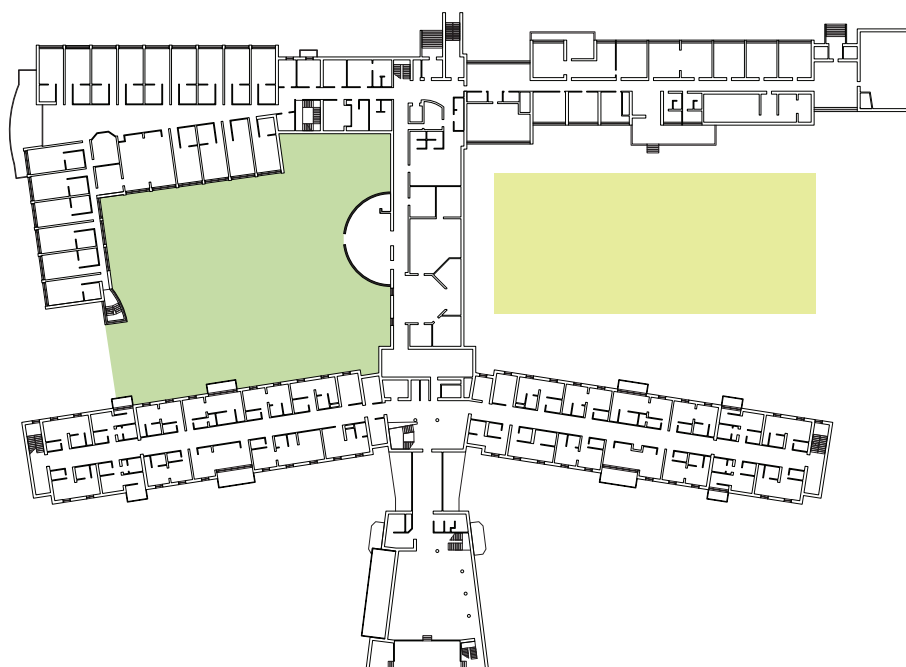
Figure 32. The Humanitas' Green Areas - Vegetable Garden (Dark Green) and Formal Garden (Light Green) © Davide Landi

Figure 33. View of the Research Container © Davide Landi
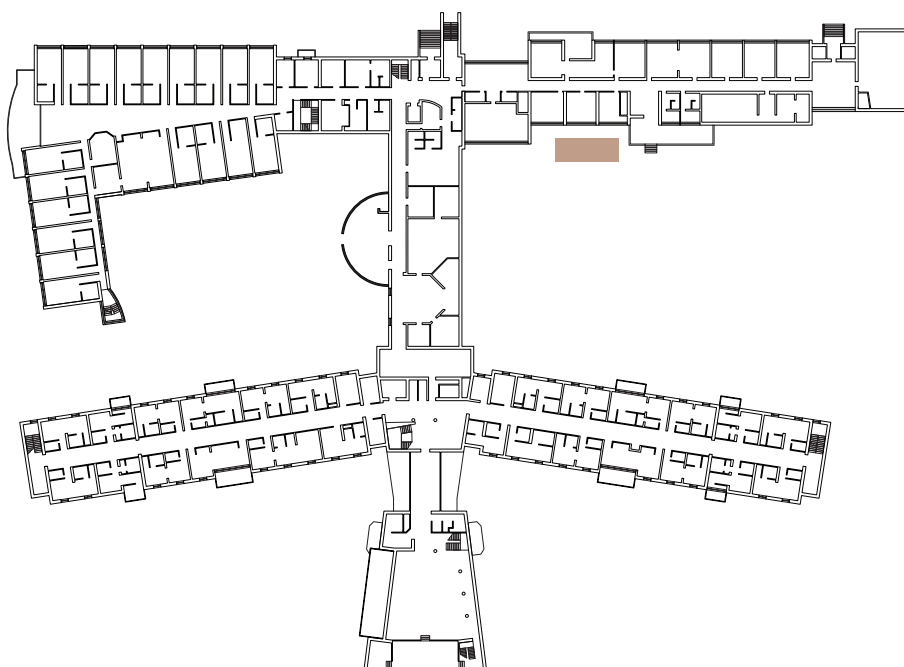
Figure 34. The Humanitas' Research Container © Davide Landi

Figure 35. View of a Corridor with Big Transparent Openings © Davide Landi

and professional caregivers can gather together for collective activities such as baking cakes.

Each floor has a dedicated team of professional caregivers and volunteers who are charged not only of the care provision but also in the management of the economic annual budget given to them by the CEO. They are free to use it in sustenance or in the improvement of the floor's physical environment. This is translated into a diversity of floors. The interior design such the furniture, the colours, material, etc. were developed through a partnership between the employees and residents and according to their unique economic availability (Professional Caregiver Interview, 2017, a). However, staff members showed an awareness of the physical limitations of the environments and its materiality. It is a simple materiality which can be summarised by mainly white walls and ceilings, together with wood flooring or carpet in different colours. The only exception is the flooring in the south-west wing. It echoes the city centre paving. Besides the spaces for the residents, there are more private spaces for the employees. Here, they can relax, have a shower, drink a cup of tea and have a chat with their peers (Professional Caregiver Interview, 2017, a). The development is a 'city' that gives to residents the chance of experiencing different kind of spaces: from private spaces to public spaces (Professional Caregiver Interview, 2017, a) - Figure 36.

Living

Most of the older adults are concerned about leaving their own houses and moving to a more institutionalised environment (Hoglund and Ledewitz, 1999). Nevertheless, interviewees argued that the informality, the openness of The Humanitas© to the surrounding community, and the presence of the students make residents more comfortable before and after moving in (Resident Interview, 2017, a). This is also positively determined by a care model which is underpinned by the concept of
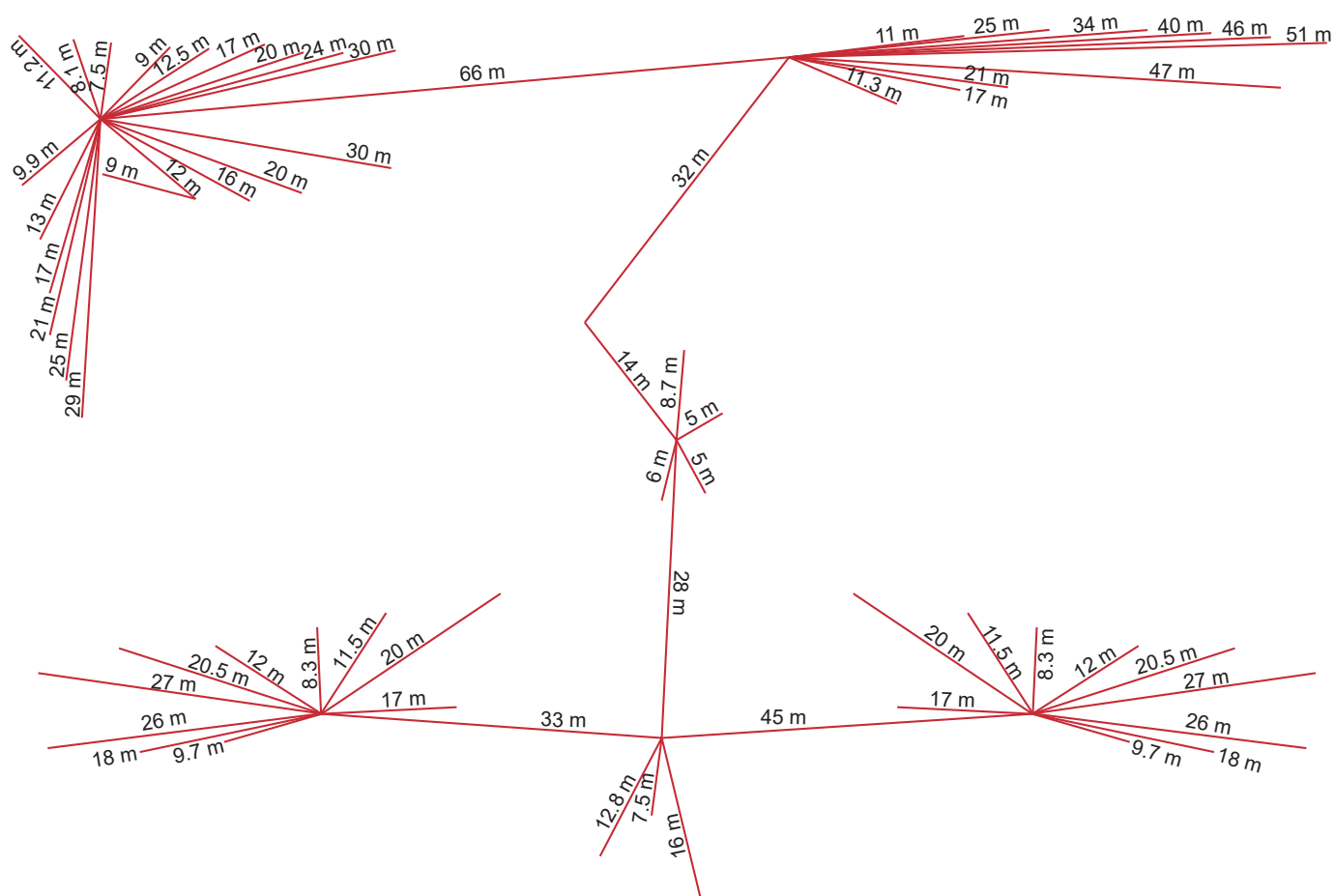
Figure 36. The Humanitas' Architectural Distances. Quantification of the Distances Between the Private Apartments and the Communal Areas © Davide Landi

social reciprocity and collaboration (TEDex, 2016). The equal relationship between volunteers, professional caregivers, students and older residents generates a strong communal sense (Resident Interview, 2017, a; Professional Caregiver Interview, 2017, a). It is fostered also by a local newspaper which is available for all of the residents to read. Today, the total population counts 166 residents of which approximately 50 older adults have dementia, 80 older adults are suffering serious physical conditions, 20 older adults have social difficulties as a main reason for living in a nursing home, 10 older adults are in short stay for recovery before going home, and since December 2012 there are six students with their own apartment in each corridor of the building. The older residents present a significant level of different mental and physical impairments (older adults with levels 5 to 7 on their assessment scale of need; this equate to people in EMI residential nursing homes in the UK) with an average age of 80 - 85 years old. The students stay there for an average period of three or four years until the completion of their studies. They have been the average age of 24 - 25 years old (Professional Caregiver Interview, 2017, a; The Humanitas Deventer, 2017). The three or four-year stay of the students permits The Humanitas© to create a stable and comfortable environment for the older residents - Figure 37.

The care model revolves around what people can still do such as laundry, cooking, peeling potatoes, shopping, teaching how to play the guitar or the use of technology, etc. (TEDex, 2016; BBC, 2015; Aftab, 2015; Al Jazeera News, 2015). These are activities that emphasise the possibilities of interaction. Additionally, the care is provided through a layered system of 200 professional caregivers and 200 volunteers (young and adult Deventer citizens) working part-time (Professional Caregiver Interview, 2017, a). While the six university students living in the nursing home are residents, they are not treated as tokenistic or caregivers (Turner, 2016). Their role is to "bring the outside contemporary world inside." The students are able to talk about the positive aspects of life instead of focusing on problems (TEDex, 2016; BBC, 2015; Aftab, 2015; Al Jazeera News, 2015).

They have free accommodation (while in the Netherlands the average student rent is 366 euros) in exchange for 30 hours per month of social work. It is just one hour per day. The students can interact with the older residents in any possible way that they prefer. They, for example, teach the residents how to use technology such as social networks and tablets, sending emails, or more contemporary forms of arts such as graffiti art (TEDex, 2016; Resident Interview, 2017, a; The Humanitas Deventer, 2017). As a result, the majority of participants confirmed that their relationship with technology is completely revolutionised. The Humanitas©, for instance, has a YouTube© channel, a TV show in the local television in which the residents are active actors, whilst, the minority mentioned that they do not use any form of technology. On the other hand, the older adult residents tell the students their life experiences or teach to them more traditional hobbies such as playing the guitar. A further activity that confirms the dialectic relationship of The Humanitas©' occupants is the preparation of simple meals in the evening to the older residents by the students. This is possible also because older adult residents do not follow any particular diet. In this mutual relationship, the older adults do what they are still able to do, while students learn how to slow down and increase their awareness of old age. They develop caring, social skills and learn how to handle difficult situations and thereby they grow up as "good adults" (Turner, 2016, TEDex, 2016; Professional Caregiver Interview, 2017, a; Resident Interview, 2017; The Humanitas Deventer, 2017) - Figure 38.

For example, a resident with mental health conditions was displaying difficult behaviours. The nurse was being threatened by the old resident and thereby one of the students came and helped her to calm down the old woman. Additionally, students do not have any particular restriction. They can organise parties in the building, or let their friends sleep over. One of the boys, for instance, came home after a night out. He ran into one of his neighbours who was suffering from Alzheimer's. He led her by the hands upstairs, and together had a glass of wine. Afterwards, he took her to the

251

Figure 37. View of the Main Entrance Showing the Different Age Groups © Davide Landi

Figure 38. View of the Multipurpose Room at Lunchtime © Davide Landi

apartment. Another of the boys, one night, came back home with three girls. Looking around for a toilet, he set off the fire alarm. The CEO did not do anything in order to be in line with The Humanitas©'s philosophy (Turner, 2016; TEDex, 2016; Professional Caregiver Interview, 2017, a; The Humanitas Deventer, 2017). This is a very positive experience for the students who after their three or four-year stay want to come back to The Humanitas© as volunteers. Although these mutual relationships present a lack of professional competences, they include some of the most relevant nursing attitudes such as communication, therapeutic, and the empathic (Smith, 2014) - Figure 39.

Nevertheless, professional caregivers are of three different levels: nurses, assistants in living and assistants of support. Even if these three figures have different responsibilities, their main role is to deliver care services. The number of students, instead, will not increase because The Humanitas© is a nursing home, and caring for older people is their main objective (Professional Caregiver Interview, 2017, a). In this win-win context, the savings are immaterial, with a huge social return on the investments (The Humanitas Deventer, 2017; Manager Interview, 2017, a). According to geriatric experts who have been seeing older residents, the simple presence of the students positively contributes to slowing down the advancement of older age-related pathologies such as Alzheimer's disease, depression, and blood pressure. This study has additionally shown that there is a link between the mental decay and mortality of older adults and their interaction with the students (Del Re, 2017).

In this particular chapter, therefore, the Humanitas© settings in Deventer (The Netherlands) was illustrated according to the three analytical segments. The Thinking provided an insight to the conceptual approach undertaken first by the architect in design of the case study, then by the partnership between the nursing home management and the Business and Sociology school of Tilburg University and the Eindhoven University of Technology to create a forward-looking care model. The Making investigated the
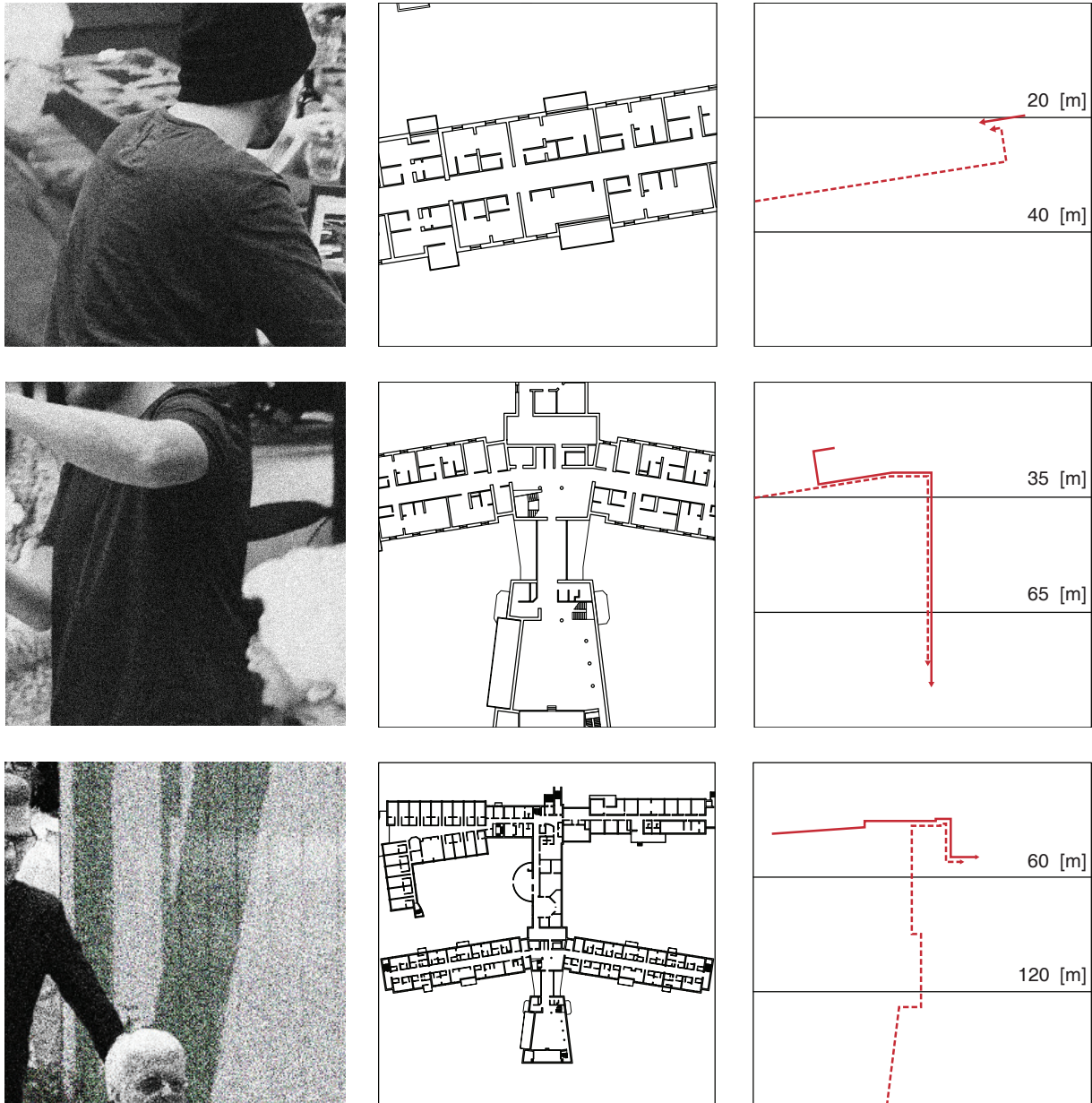
Figure 39.The Humanitas' Movements through Spaces. It Illustrates the Movements Towards Spaces of Encounters between Different Age Groups. The Dashed Line Represents Young-Adults' Movements, while the Continuous Line Represents Older-Adults' Movements © Davide Landi

Figure 40. The Humanitas' Axonometric View © Davide Landi

Humanitas' evolutional as well as spatial nature. In this, the physical settings of the case were described. The Living empirically explored the interactions among different groups of inhabitants and the Humanitas' physical settings (e.g. old residents, young residents, volunteers, and professional caregivers). To support the here undertaken theoretical discourse on architectural types, however, the empirical analysis is further extended by the following section. It illustrates the second case study, the Rudolf Senior Home - Figure 40.

Section 2: The Rudolf© Settings in Helsinki (Finland)

Architect: Unknown/Pablo Riquelme

Year: 1974

Location: Laajasalo, Helsinki, Finland.

Typology: Nursing Home - Figure 41.

Interview N.	Interview Type	Business/Profession	Role
2	Business/Management	Housing Provider/ Care Provider	Manager of the Rudolf Senior Home, and Manager of the Home that Fits Project Team
5	Business	Housing Provider/ Care Provider	Staff
1	Design	Architect	Architect of the Home that Fits Project Team
4 and 4	Users	Residents	Students and Older Adults

Helsinki, the capital city of Finland, is among the European cities with a high quality of life, which is confirmed by the consistent rate of satisfaction of its inhabitants. For example, 93% of the citizens are satisfied by the public transportation services. They are also satisfied with the level of green spaces (73%) and the feeling of safety (93%). This is reflected in the trust that the inhabitants have of each other both at the urban and neighbourhood scale (83% of the people can be trusted). This high satisfaction rate can also be found regarding healthcare services (European Union, 2015, b). However, the new demographic setting has had a downside on the provision of care.
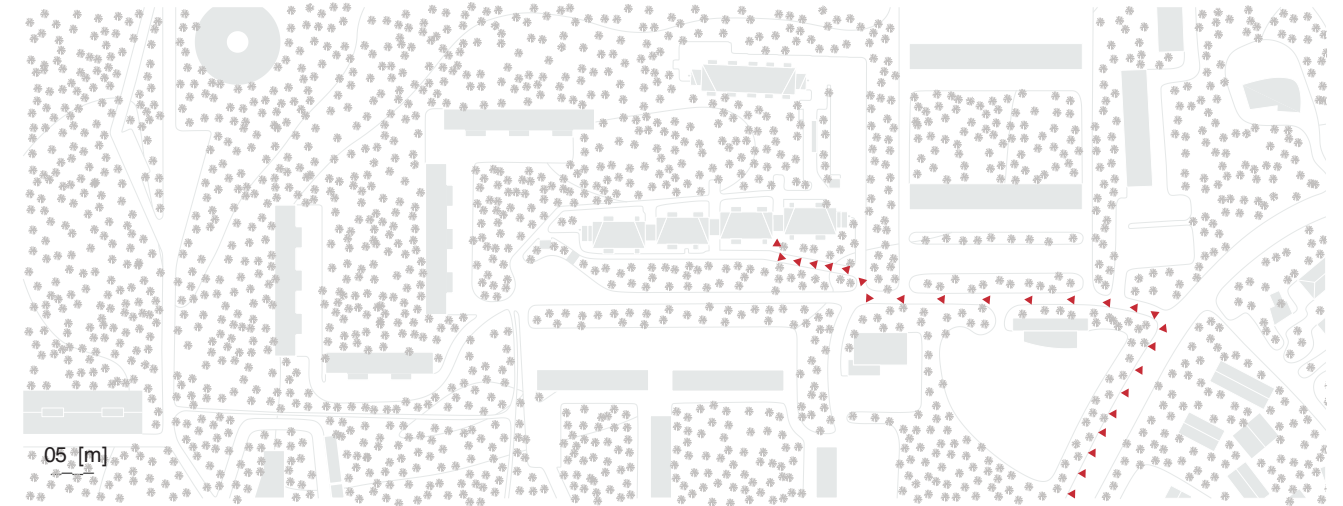
Figure 41. The Rudolf's Serial Vision. It Illustrates the Journey from the Closest Tram/Bus Station to the Main Entrance of the Nursing Home © Davide Landi

257

It implies significant responsibilities counterbalanced by "little formal power" (Saarnio et al., 2012).

Furthermore, Helsinki is among the European capitals in which rents are spiralling and increasing. In particular, 88% of inhabitants confirmed that it is not easy at all to find suitable housing for a reasonable price (European Union, 2015, b). For example, 1,300 people, out of which are 700 young adults and university students, are homeless in Helsinki (Agi, 2017; Manager Interview, 2018; The Guardian, 2017). Homeless is a term adopted in this thesis, which refers to social and age groups who have had a difficult social and economic background. This does not allow them to leave their domestic environment or to have an independent flat (i.e. they are hosted in relatives and friends' apartments). A young resident stated: "In Helsinki rent is very expensive. I could not afford to live anywhere else" (The Guardian, 2017; Resident Interview, 2018; CNN, 2016). It is related to a cultural belief in which young adults between 18-25 years old must achieve their full economic and social independence (Manager Interview, 2018; CNN, 2016; Stories, 2016).

From this, the Helsinki Department of Youth launched the three-year project: 'A Home that Fits' (i.e. Oman Muotoinen Koti) in February 2015. It was underpinned by strong Nordic values such as equality, trust and openness. They have affected previous urban strategies such as mixed-use regulation (i.e. equal split of 40% private housing and 40% social housing). 'A Home that Fits', therefore, attempted to find a new housing solution for homeless young adults. Design becomes a tool with a social agenda to suggest simple and effective strategies. (Rudolf Senior Home, 2018; Designer Interview, 2018; The Holding Project, 2017; CityLab, 2015). By bringing together designers close to sociologists, researchers, public sectors workers, and member of the public, the definition of a common language was fundamental – "Speak Human" (Designer Interview, 2018; Design Stories from Helsinki, 2015). Initially, the European Community

was supposed to support the project with a budget of €1,300,000. However it was reduced to €100,000. The lack of money and thereby of experts (e.g. researchers) who were engaged with the project triggered innovative ideas and partnerships with other smaller organisations (Manger Interview, 2018; The Holding Project, 2017; Agi, 2017).

Additionally, the investigative exploration of alternative housing solutions and available resources revealed that the challenges were not with the availability of the resources (i.e. Helsinki city has 1,000,000 of unused square metres), although it was in the will of using them in a socially and economically sustainable way.

Consequently, three different projects were proposed. First: a seasonal housing project. Young adults and university students could have free accommodation in exchange for seasonal and local employment. Second: a communal housing project in existing empty apartment buildings. It provided 11 flats for young adults and university students with some shared facilities such as kitchen, and bathrooms. Third: the Rudolf Senior Home Project. Four students were accommodated in a nursing home for older adults with different levels of physical and mental impairments. The first and second project came to an end in December 2017, while the Rudolf Senior Home Project is the only one to continue (Manager Interview, 2018; The Holding Project, 2017).

This section, therefore, empirically analyses the Rudolf Senior Home in Laajasalo Helsinki, Finland. Laajasalo is an archipelago with a population of 15,961 in the southern part of Helsinki. I attempt to describe the unique and reciprocal relationship between the innovative care model, the physical setting, and its occupants. The term 'occupants', here, refers to the residents, both old and students, volunteers and staff. The Rudolf Senior Home is a Finnish functionalist apartment building built in 1974. It is composed of two blocks: the west and east blocks with five storeys above the ground each. They are connected through a green area - Figure 42. The urban plot is defined

by a natural area on the west side, and by a residential/apartment blocks on the south, west and north sides. The closest bus station is along Reiherintie (210 m). However, Reiherintie and subsequent Rodolfintie have paved sidewalks (1.5 meters). Along Rodolfintie, which is vehicles-accessible, it is possible to find three kindergartens. They are respectively at 291 meters, and 141.1 meters, and 316.5 meters. A natural park can be found at 171m, while a boating club is at 125.5 meters. Nevertheless, there is no shopping area in the neighbourhood. The closest supermarket is at 3km - Figure 43.

Since its inception, it has hosted different social and age groups with a difficult background. Only in the 90s, the Rudolf was turned into a senior home/nursing home. According to the Finnish Building Regulation (i.e. Land Use and Building Act adopted in 1999), the Rudolf Senior Home had to fulfil the spatial and accessibility requirements of older adult long-term care facilities. Consequently, small size apartments (i.e. 15/16 square metres) were joined together. Now, there available one/two-bedroom apartments between 23-46 square metres (Department of Housing and Building, 2005; Rudolf Senior Home, 2018; Manager Interview, 2018). It underwent many adjustments during the years to adequately answer to the continuously changing economic and demographic settings of the Finnish socio-economic context (Designer Interview, 2018). In the early 2000s, the west apartment block was further refurbished to accommodate the residents' individual needs (i.e. young and older adults with mental impairments). For example, the size and number of communal areas were increased.

Nevertheless, the first student moved in during January 2016. No additional adjustment was made to the buildings. The students were accommodated in the apartments, which were not suitable for older residents (The Guardian, 2017; Rudolf Senior Home, 2018; Manager Interview, 2018). Since January 2016, The Rudolf © in Helsinki opened up the traditional care model and residential setting to a broader group of non-neces-
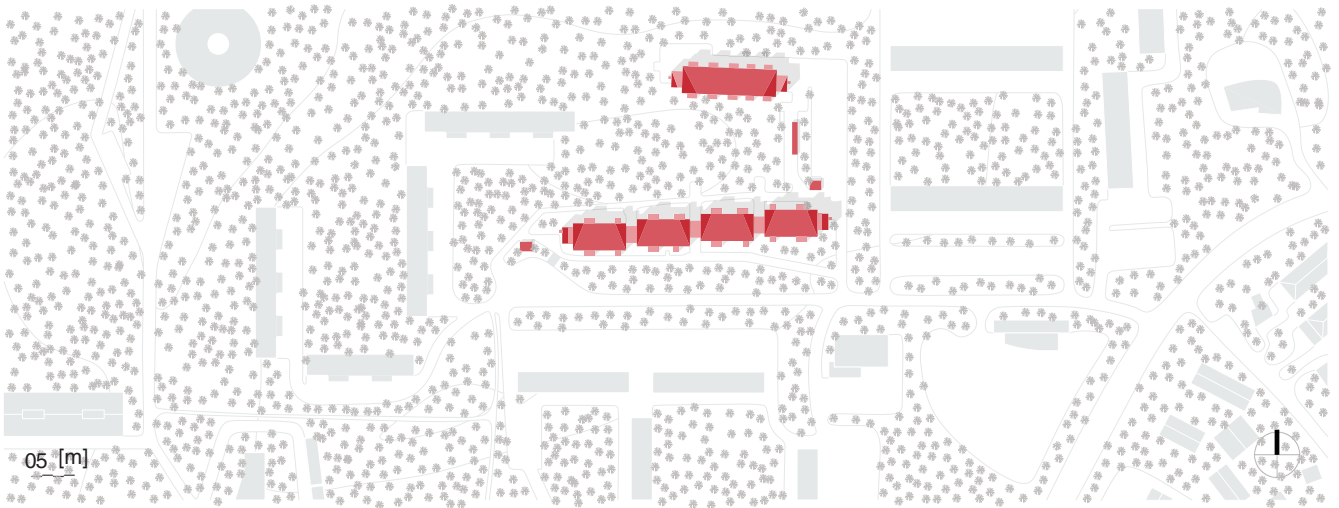
Figure 42. The Rudolf's Site Plan © Davide Landi

05 [m]

Kindergarten

291 m

Boating Club —— 125.5 m

141.1 m

Kindergarten

316.5 m

210 m

171 m

Bus Stop

Kindergarten

Natural Park
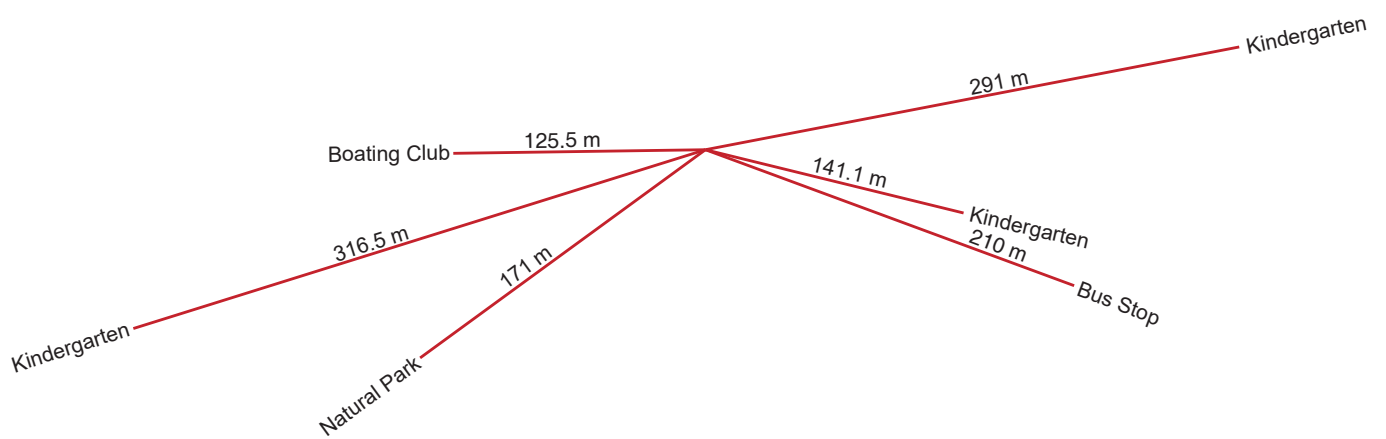
Figure 43. The Rudolf's Urban Distances. Quantification of the Distances Between the Case Study and the Main Urban Features such as Bus/Tram Stations, Churches, Shopping Area, Markets, etc. This Defines the Scale of the Community © Davide Landi

sarily professional caregivers. In this, the Rudolf may propose an alternate answer to the socio and economic challenges posed by the contemporaneity and the new demographic structure, where the number of people with dementia is expected to rise.

This section, therefore, illustrates the collected data during this study. It is structured around the three recurring themes. They are (a) Thinking; (b) Making; and (c) Living. The chapter, together with the previous on the Dutch case, studies supports the discussion surrounding this thesis which targets the provision of a piece of architectural theory in order conceive more socially and economically sustainable architectural typologies (Rudolf Senior Home, 2018; Designer Interview, 2018; Manager Interview, 2018).

Thinking

The Rudolf © in Helsinki is a senior home. The name of the architect is unknown. However, it embodies many characterising features of the international functionalist movement. The most prominent proponent was Alvar Aalto. He combined the Bauhaus principles with latent Finnish cultural aspects such as "strong individualism" and "determined utilitarianism" (Dobbins et al. 1963, p.3).

Additionally, his buildings showed a sense of deep comprehension of social and geographical settings. Social responsibility, appropriateness, thoroughness are three key features that have differentiated modern Finnish architecture from other national and regional alternate expressions. It was not just the application of a technocratic ideology to the built environment and aesthetics. Inevitably, they affected forms and proportions of Alto and Finnish architecture as a whole. Dobbins et al. (1963, p. 4) write that:

Apparent placidity gives away to vitality; seeming coldness gives away to

receptive warmth, and underpinning each work is a fundamental sense of honesty and determination.

Consequently, this has repercussion on the Finnish architecture of the following thirty years. The Rudolf© presents, on the one hand, the architectural forms and material peculiar to the modern movement. For example, the architects emphasised the horizontal dimension, which was interrupted by vertical elements such as internal staircases and abundant balconies. These are of the size of a single person with a concrete plastered or steel balustrade or railings. The Finnish functionalist materials were external bricks, glass, concrete, wood and steel. The simple use of materials can also be found in the interior spaces. The finishing of the walls was smooth to be easily cleaned. A work of architecture, therefore, was synonymous of natural light, fresh air, and hygiene. On the other hand, Rudolf© confirms its geographical and social contextual understanding. This is further elaborated throughout this section.

Over time, the Rudolf© underwent through two refurbishments: the first occurred in the 1990s and the second in early 2000s. When the first student moved in, the Rudolf© still had many physical constraints. Nevertheless, the role of the designer has not been to remove architectural barriers while to build a community and social ties. Designers are educated in a way in which they can speculate or imagine how human people behave. In a certain sense, designers are sensitive towards inhabitants' needs. This shifts the emphasis from architectural elements to inhabitants and opportunities. The designer, therefore, became a facilitator of the project between its central ideas, and the different subjects involved (Design Stories from Helsinki, 2015; The Holding Project, 2017). First, the architect of The Home that Fits Project opened up the problem of youth homelessness and older adults' loneliness to a wider audience such as the different figures who took part in the project. Second, he tackled cultural challenges, which were posted by the Finnish context: in particular, the lack of empathy between same

as well as different age groups. This has been inherited from an efficient political and social system, which have taken care of the inhabitants. Over time, it has inhibited inhabitants' capacity in collaboration and in finding new solutions from the unexpected (Designer Interview, 2018).

Historically, the perfect social and political mechanism has supported the majority of the Finnish population. Inhabitants who could not successfully fit within the mechanism have been automatically excluded for the sake of its ideological perfection. However, the contemporary socio-economic setting (e.g. a diverse cultural and religious background) has intensely questioned the Finnish system. It has posed challenges that cannot be avoided any more. The displacement among Finnish inhabitants, in particular young adults, is an example (Designer Interview, 2018). Through experi-mentation, collaboration, binding the social tissue and design methodologies, an innovative housing solution was conceived. By combining two different age groups, the innovative housing solution has contributed to the support of a diverse population. As the architect of The Home that Fits Project said: "It is like gardening. In an orchard, you must aim for diversity. The good fruit as well as the bad fruit. This generates an equilibrium that allows the natural environment to work genuinely" (Desinger Interview, 2018). Additionally, it helped to reduce stigma towards not only older adults but also young adults (i.e. in what they can do and their decision-making capability). (Design Stories from Helsinki, 2015; The Holding Project, 2017; CNN, 2016). The architect of The Home that Fits Project also argued that "It is easily thought of young people that you can't let them here, they will destroy this place. We wanted to show that the opposite is true: young people are needed to hold this place together" (Manager Interview, 2018). The provision of accommodation is a tool that triggers young adults' independence as well as their responsibilities (The Holding Project, 2017).

In this, the Rudolf© aimed to preserve its principles and values. They are underpinned

by a sense of togetherness, a community to avoid prejudices. This ensures equality and quality in the care provision while preserving residents' privacy. Older adult residents, therefore, preserve their active roles according to what they are still able to do, while professional caregivers generate a supportive and secure environment tailored around older adult residents' needs and strong team working. However, the Rudolf© care model has some limitations. For example, the older adults' residents suffer from loneliness due to the institutional character of the settings (Rudolf Senior Home, 2018; Manager Interview, 2018). The Home that Fits' manager, when asked about older adults' social isolation, said: "The first time I visited Rudolf© Senior Home, I was surprised how isolated older adults isolated are. A relevant number of older residents have never shown up to a group, or recreational activities, nor relatives or friends have visited them. Having young adults around deeply change the perception and experience of a Senior Home" (Manager Interview, 2018). Therefore, the innovative inhabitation model of The Home that Fits tackles this while providing an alternative solution for homeless young adults (Rudolf Senior Home, 2018).

What stands out in this process is the role of The Home that Fits' manager. Due to a lack of economic resources, the manager who covered different roles opened up the decisional process to different figures such as policymakers and young adults. They, therefore, embraced responsibilities proportionate to their competences, although beyond their professional or social positions. The Finnish National Housing Organisation, for instance, provides investments in the design and construction of Senior Housing.

Consequently, the legislation does not allow other age groups to be living in these settings. However, the manager of The Home that Fits could get one-year permission to have young adults to live in Senior Homes from the Helsinki Town Council local authorities (i.e. they stated: 'You can try this model for one year and we will decide to

continue or not'). This was possible only through a robust relational network (Manager Interview, 2018).

The following step was the definition of the right Senior Home that could accommodate the project. The Humanitas© in Deventer (the Netherlands) was the precedent (see Chapter Four) (Designer Interview, 2018). Additionally, The Home that Fits was geographically restricted to Helsinki city area. There was initial scepticism from the Helsinki Health Care Department (i.e. talking about this project one of the local authorities said: 'Youngsters will move in and ruin the Senior Home' or 'Older Adults do not like to live with youngsters'). However, it helped The Home that Fits' project to find the right institution in three months. The Helsinki Health Care Department suggested the Rudolf© senior home. It is the biggest older adult care facility in the Helsinki city area, and it is under its direct control (The Guardian, 2017; Manager Interview, 2018). From this, the young adults could move in. Nevertheless, one of the key aspects was the relationship between older adult residents and young residents underpinned by an informality.

First, the manager of The Home that Fits had to convince the Helsinki City Social Department that young adults would not behave as professional caregivers while they would spend time with older adult residents as good neighbours. Young adults, therefore, would be able to embrace the related responsibilities (Manager Interview, 2018). In this, young adults do not have an academic or professional background in health care or social care. Consequently, their selection process started on the web. Young adults between 20-25 years old, from Helsinki City area, could apply through Facebook© (Manager Interview, 2018; The Guardian, 2017; CNN, 2016). There were 300 applications. As one student said: 'My mum told me about this new project that she heard from a friend of hers. I switched on my computer, and I wrote my application." (Stories, 2016). The selected one was invited to two rounds of interviews. The first one

was a group interview and the second one was to an individual interview. Whoever showed stronger motivations and better relational attitudes were chosen. For instance, an old participant to the group interview alerted young adults that not all the old people are friendly (Manager Interview, 2018; The Guardian, 2017; CNN, 2016).

The Rudolf© housing solution was rapidly emulated in Finland. Currently, six senior homes combine different age groups in the same architectural settings. It was a test, and thereby other managers were encouraged to adopt a similar solution (Manager Interview, 2018).

Making

The Rudolf© senior home was completed in 1974. The Rudolf© was first realised to give shelter to Helsinki citizens who presented socio-economic difficulties. It was a social housing complex. It presents many of the physical and less physical features, which are peculiar to the modern Finnish movement. For example, the horizontal dimension of the building prevails on the vertical ones. The single-person size balconies with steel rails constellate the elevations of the two residential blocks. There is also the simple use of external and internal finishing such as white plaster. Additionally, the social housing programme embedded in the building confirms an openness towards the comprehension of existing socio-economic patterns.

Nevertheless, the Rudolf© became a senior home in the 1990s, and Helsinki Health Care Department took over its management. While the age group of the Rudolf©'s occupants changed, they still presented a difficult socio-economic background such as older homeless Helsinki citizens. This confirmed the social character of Finnish architecture through time. However, the Rudolf© went through a refurbishment process according to the spatial and accessibility requirements of the Finnish Land Use and

Building Act for long-term-care facilities (e.g. the number of internal staircases were reduced, or alternative paths were proposed by introducing ramps or wheelchair lifts, and substitution of bathroom fittings). In this, the Rudolf© accommodated 124 residential units. They are one or two-room units with an average size of 23-46 square metres (i.e. couples of 15/16 square metre residential units were joined together) (Department of Housing and Building, 2005; Rudolf Senior Home, 2018; Designer Interview, 2018; Agi, 2017). The 124 residential units are distributed with two five-storey residential blocks: the west and east blocks.

Additionally, the west block was further refurbished in the early 2000s. It attempted to accommodate young and older adult residents with mental impairment needs. A more explicit colour language, for instance, was adopted (i.e. wood flooring or carpet in different colours).

Furthermore, the communal areas were increased in number (i.e. a restaurant, dining rooms, multipurpose rooms, a gym, offices and changing rooms for professional caregivers) - Figure 44. However, in all cases, the informants reported that the Rudolf© has strong physical limitations such structural columns in the middle of rooms, narrow corridors, and steep ramps and an excessive number of indoor staircases. This abundantly limits the use of communal area that should further be increased in number, in size, and concerning their permeability - Figure 45. It was a recurrent theme in the interviews, although a sense amongst interviewees was that the spatial limits could trigger creative solutions (Professional Caregiver Interview, 2018; Resident Interview, 2018). Consequently, some of the residential units were left unoccupied and thereby initially three and then four students were able to take them from January 2016 without further adjustment to the building (Manager Interview, 2018).

The west and east blocks together have a total footprint of 2,035 square metres. The

Figure 44. View of the Gym which is Open to the Public © Davide Landi

Figure 45. View of a Communal Space © Davide Landi

Rudolf©'s main bulk matches with the scale of typical Finnish housing blocks present in the surrounding, prevalently residential area. The two blocks are placed along the gentle slope that characterises the geography of the site. They are connected by central green space, which is open to the surrounding community. As revealed by interviews, the green space, for example, hosts various recreational and communal events such as barbecues (Professional Caregiver Interview, 2018; Resident Interview, 2018) - Figure 46. Some residents suggested that outdoor activities should increase in number. However, this confirms the particular attention towards a geographical understanding of the context, which is peculiar to modern Finnish architecture. The volumetric articulation of the two blocks with their different heights emphasises this attitude. Inevitably, it implies the interior space such as the consistent number of indoor staircases (Professional Caregiver Interview, 2018) - Figure 47.

In this, the two linear blocks are developed from north to south. Consequently, all the residential units maximise their exposure to the natural light - Figure 48. Additionally, the two blocks accommodate a diverse population. The east block accommodates young adult/students and older adult residents with no or early stages of mental and physical impairments. The west block accommodates young adults and older adult residents with physical and mental disabilities. In particular, young adults with mental impairments occupy the first floor, while older adults with mental and physical impairments such as dementia occupy the rest of the levels. Cantilevering concrete eaves suggest the entrances or fire exits. The main entrance is at the centre of the east block. Inside, there is no reception desk, although it is a welcoming space with benches, armchairs and tea table - Figure 49, Figure 50.

Furthermore, the spaces and thereby activities are differently distributed. In details, the ground floor of the east block, which in part exhibits a lower ground floor due to the peculiar geography of the site, hosts the most public spaces of the senior home

Figure 46. View of the Formal Garden © Davide Landi
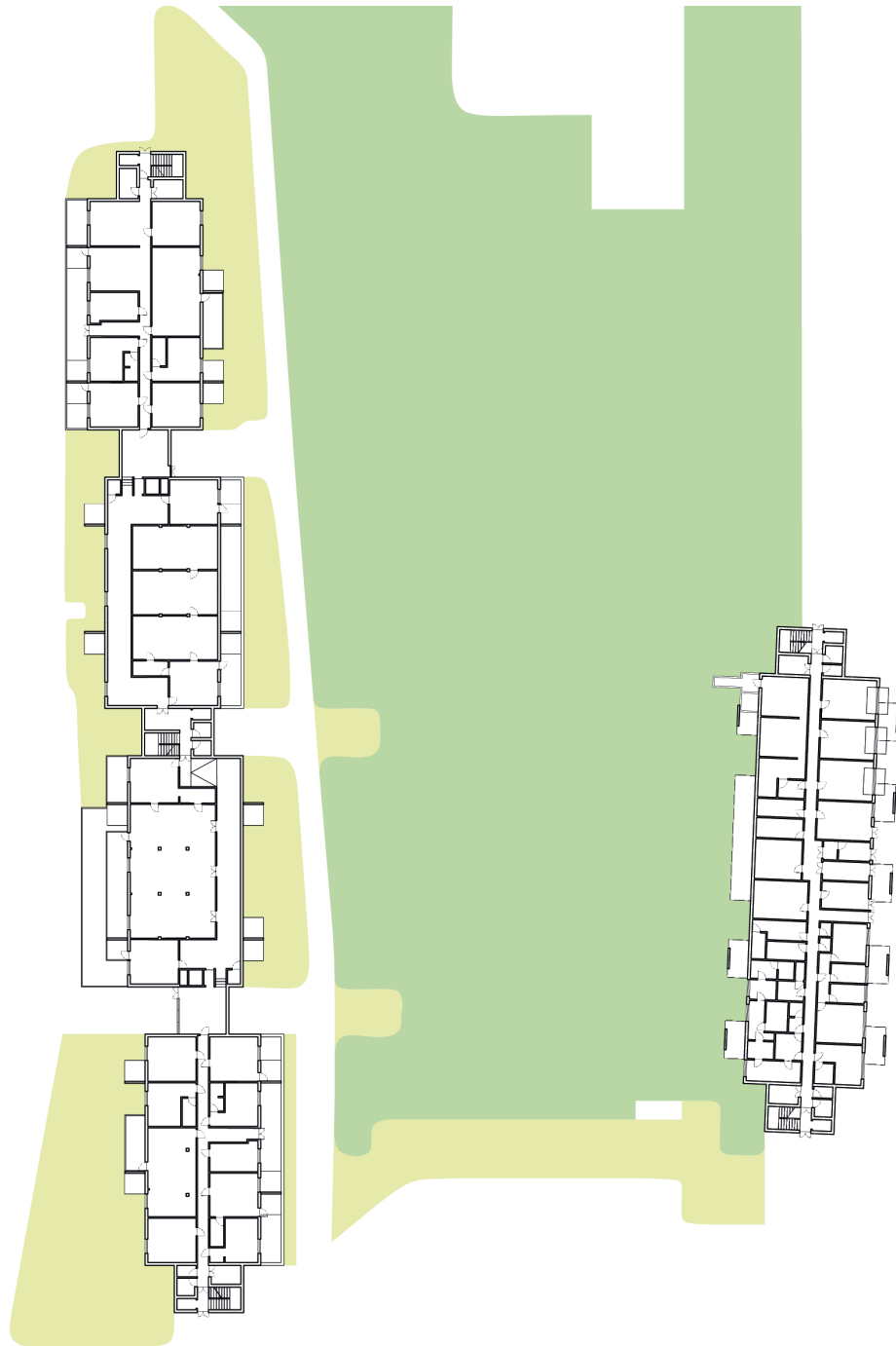
Figure 47. The Rudolf' Green Areas - Wild Garden (Dark Green) and Formal Garden (Light Green) © Davide Landi

Figure 48. View of East Block and its Exposure to Natural Light © Davide Landi

Figure 49. View of the Main Entrance Showing the Absence of a Formal Reception Desk © Davide Landi

Figure 50. View of the Main Entrance Showing the Presence of a Tea Teable and Armchairs © Davide Landi

and thereby activities. From north to south, there are: staff offices (i.e. occupational therapists, professional caregivers, and managers' offices); a communal room that accommodates meetings and recreational activities such as Bingo games - Figure 51; the main entrance; a restaurant; a laundry; a Finnish sauna for residents and staff; and a gym. The restaurant and the gym are open to the public - Figure 52. In particular, the gym is free, and it is mostly used by members of the surrounding community (Manager Interview, 2018) - Figure 53. The privacy gradient (Cullen, 1971), both at the scale of the whole building and single apartments, thereby, has a linear sequence. Residents and visitors access the Rudolf© through the more public spaces such as the entrance space, the restaurant and the gym at the ground/lower ground floor. They are then driven to the horizontal and vertical circulation systems such as corridors, ramps, lifts, and wheelchairs lifts. Only after, residents and visitors can access the residential units, which are placed on the rest of the storeys - Figure 54, Figure 55. They are one or two-room residential units (i.e. an average of 23-46 square metres each) with a simple and compact layout. They consist of an entrance, which acts as a filter between the public corridors, and the more private residential areas. There is also a spatial connection element between the living room and the bathroom - Figure 56. The bedroom or a simple bed respectively for two-room or one-room residential units is placed sequentially in a detached room or at the bottom of the living room. Both types of residential units are thereby physically (no division wall) and visually connected. There is minimal use of corridors inside the private units. Both one and two-room residential units have private kitchens - Figure 57. However, professional caregivers attempt to limit the use of kitchens by residents while inviting them to spend more time in collective meals and activities to increase the possibility of encounters among the residents - Figure 58, Figure 59. Only in cases of necessity, such as illness of the residents, are the meals delivered directly to a residential unit (Professional Caregiver Interview, 2018) - Figure 60, Figure 61.

Additionally, each residential unit has single-person size balconies with steel rails (4.5

Figure 51. View of a Communal Space © Davide Landi

Figure 52. View of the Sauna © Davide Landi
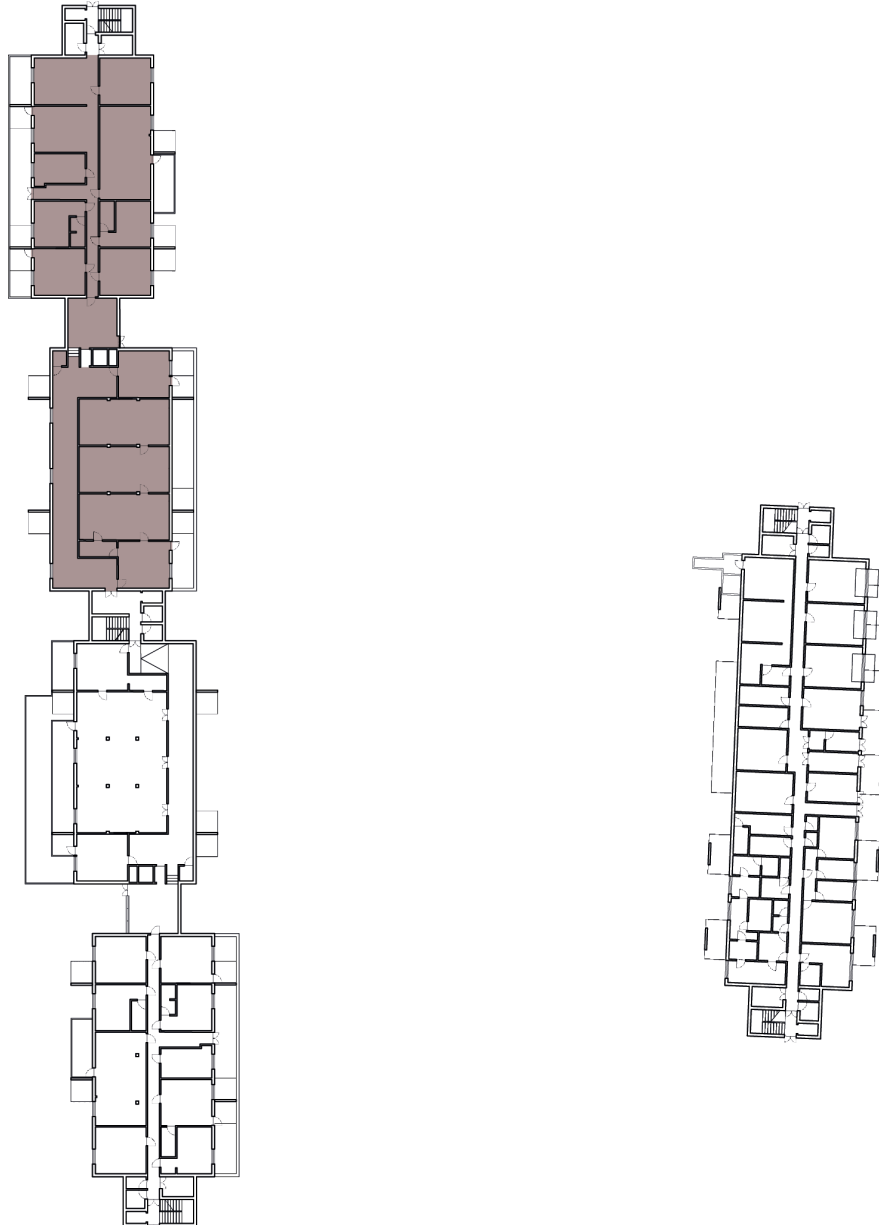
Figure 53. The Rudolf's Gym, Sauna and Restaurant Ground Floor © Davide Landi
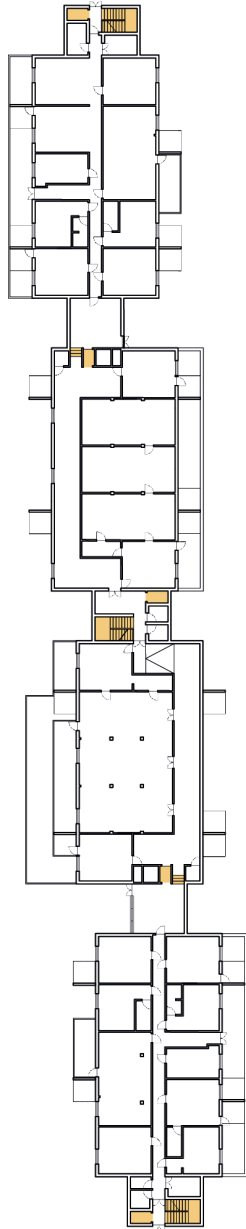
Figure 54. The Rudolf's Hard Areas - Ground Floor © Davide Landi
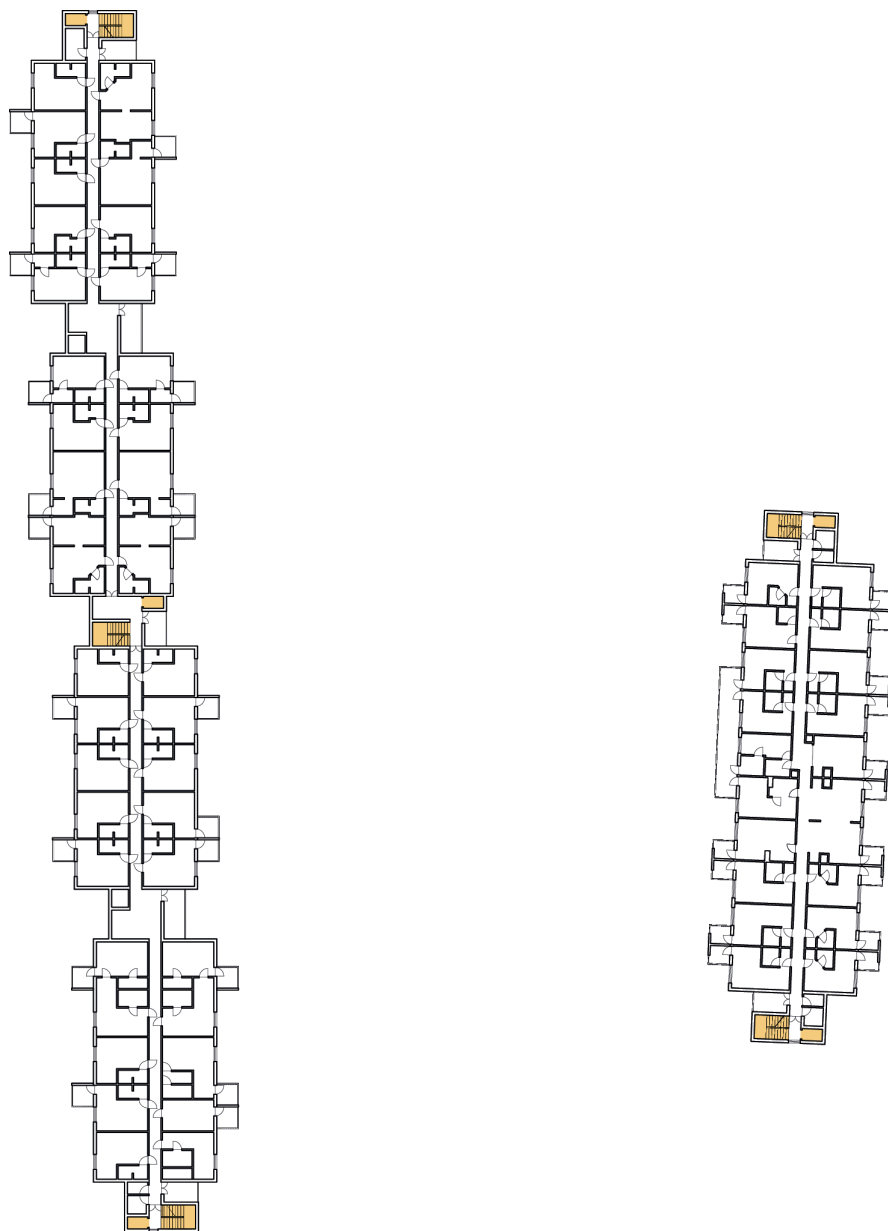
Figure 55. The Rudolf's Hard Areas - First Floor © Davide Landi
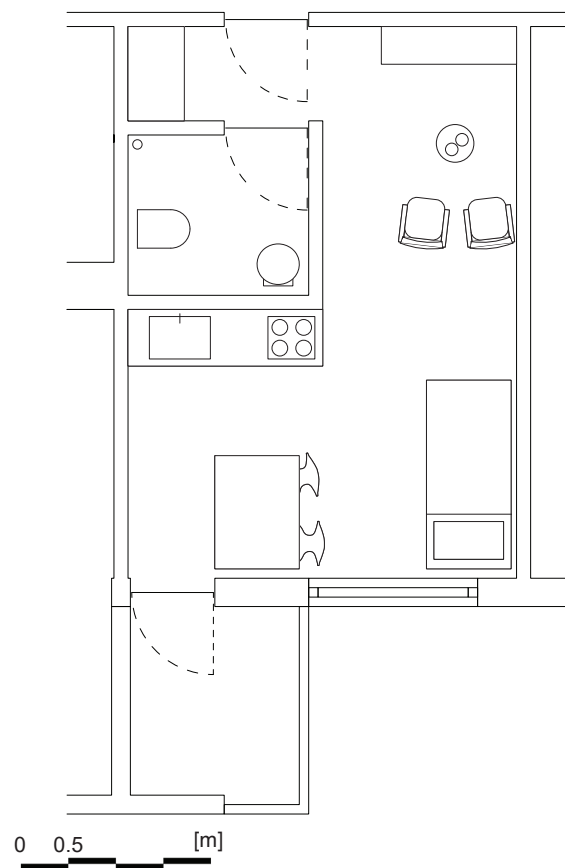
Figure 56. Standard 1-Room Apartment Floor Plan © Davide Landi

0 0.5   [m]
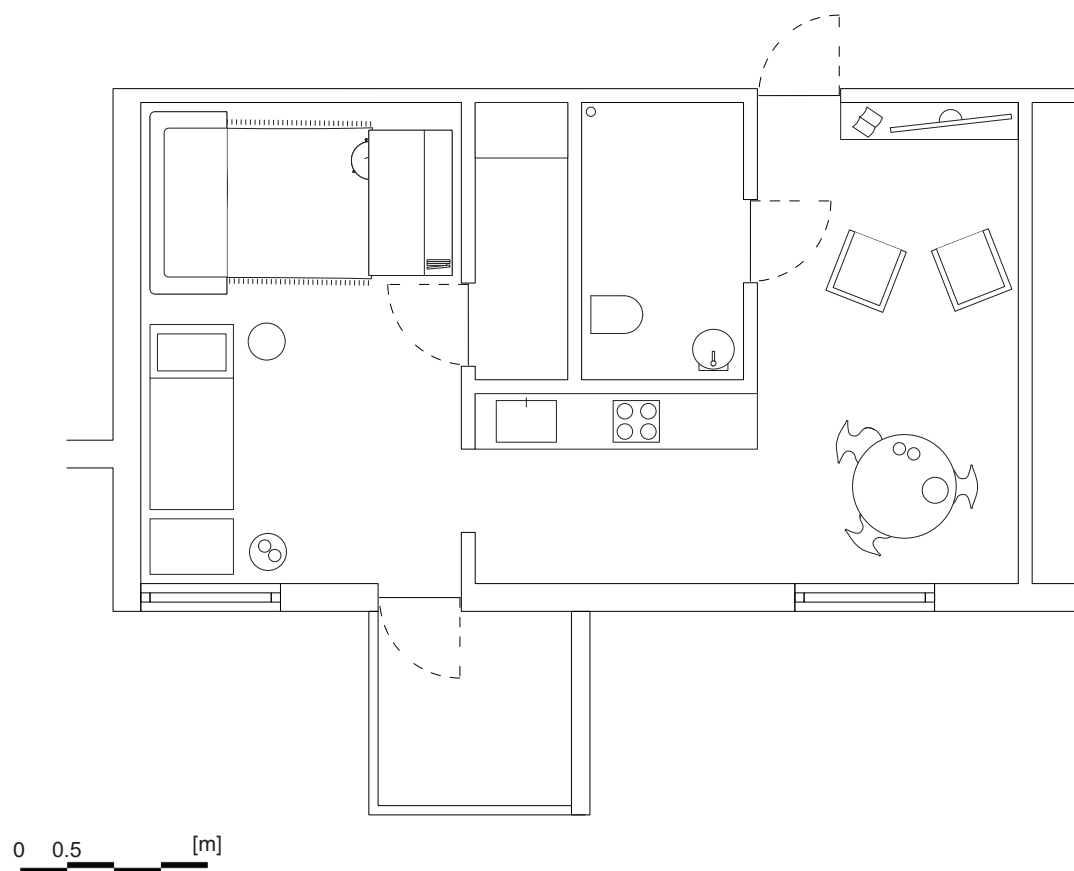
Figure 57. Standard 2-Room Apartment Floor Plan © Davide Landi

Figure 58. View of the Restaurant which is Open to the Public © Davide Landi

Figure 59. View of the Dining Room © Davide Landi
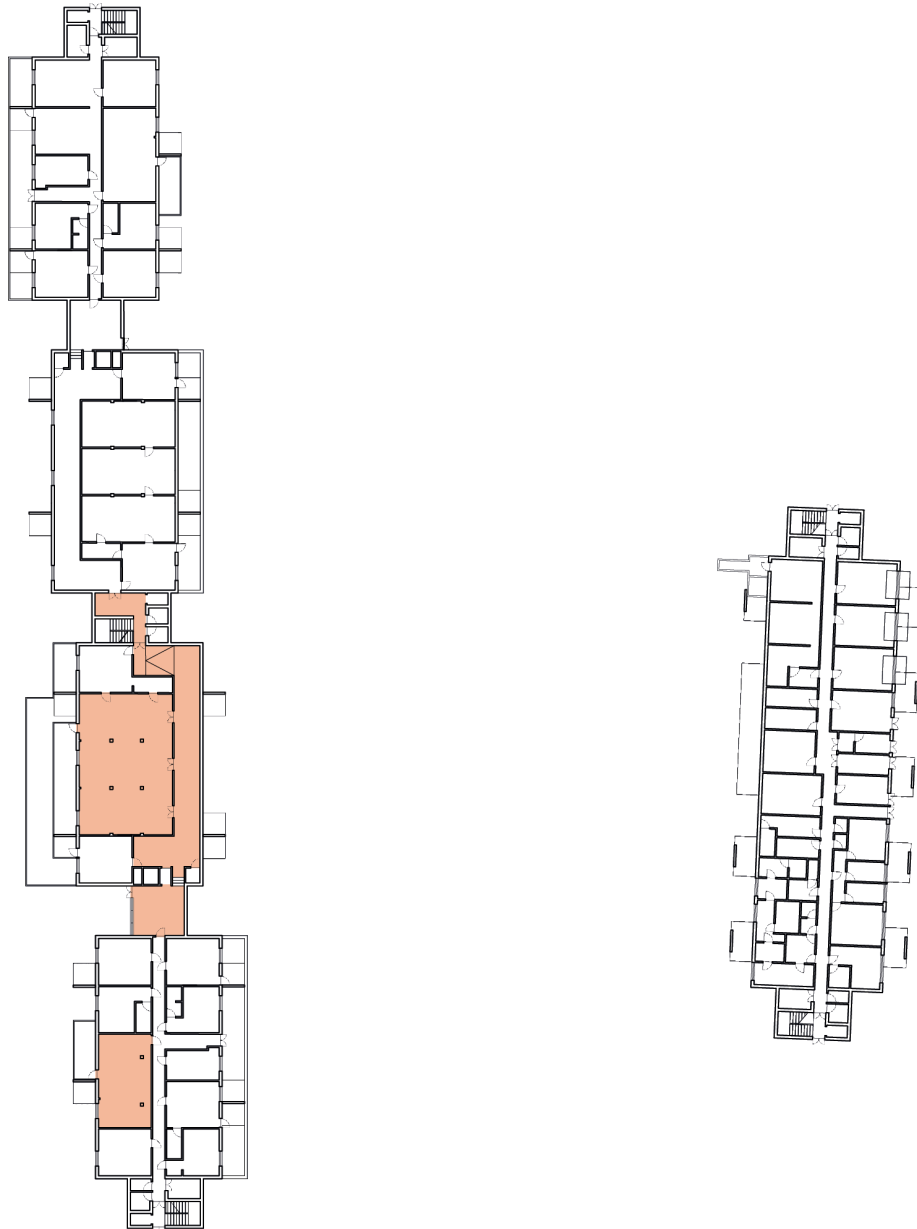
Figure 60. The Rudolf's Communal Areas - Ground Floor © Davide Landi
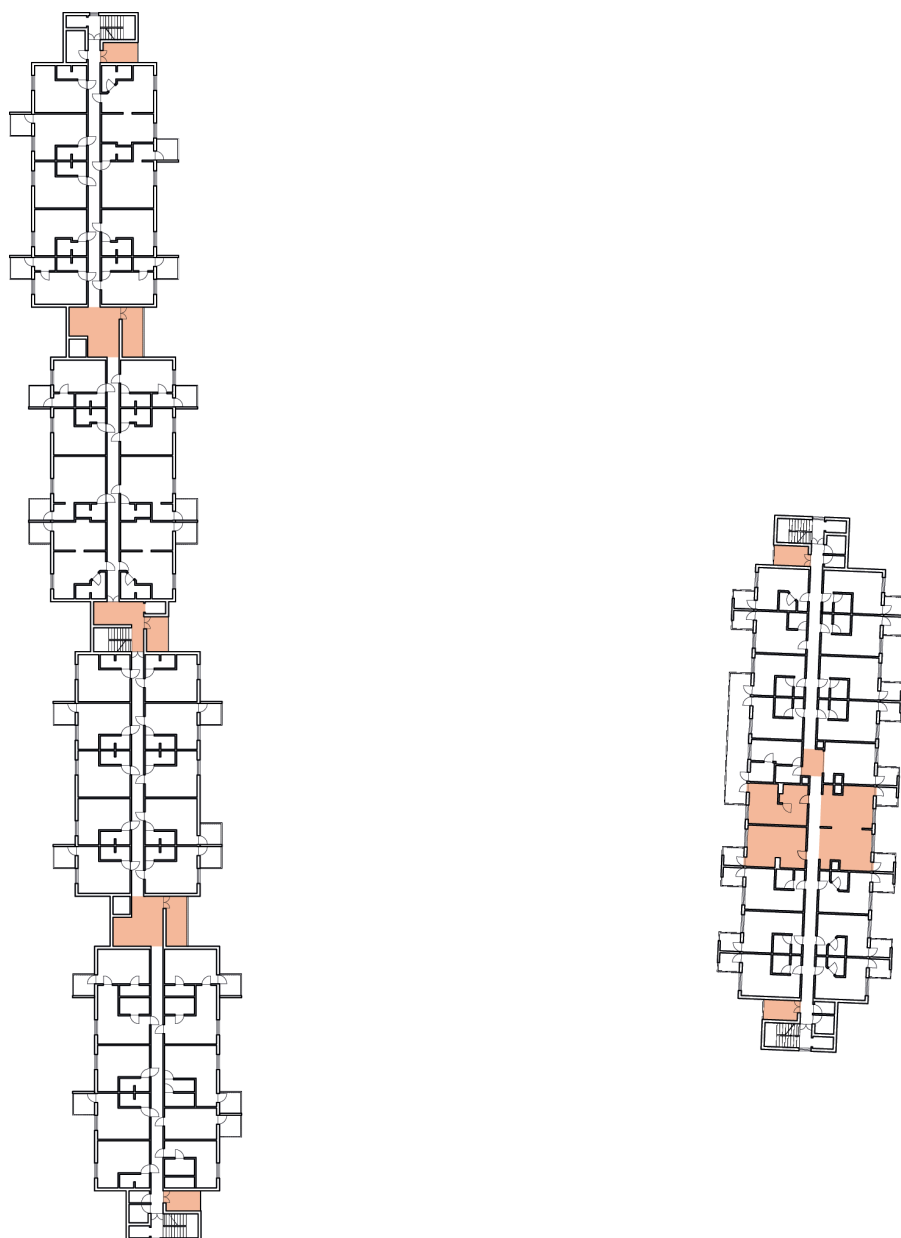
Figure 61. The Rudolf's Communal Areas - First Floor © Davide Landi

square metre each). They have outdoor furniture such as tables and chairs. However, thresholds between the outdoor terrace and the indoor residential unit have a change in height - Figure 62. Older adult residents cannot easily experience them (Resident Interview, 2018).

As briefly introduced previously, the circulation system revolves around two spatial elements: corridors and vertical circulation cores. They may be considered as "hard areas" (McGlynn et al., 1985) of the Rudolf©. In particular, corridors are 1.2 m wide and an average length of 120 m. They do not have openings, and thereby the claustrophobic perception of these linear spaces are emphasised. Additionally, they augment the institutional perception of the facility by its inhabitants as well as difficulties in navigating the building. As one interviewee said: 'You spend the first year learning how to move in the building' (Resident Interview, 2018) - Figure 63.

Nevertheless, vertical circulation cores, which are three in number, together with two collective spaces (20 square metres each), fraction the long corridor into four segments of 25 meters each. They do not only segment the corridors in smaller segments but also into cluster groups of 4 or 5 residential units together. This grouping is also emphasised by the presence of sliding doors or steel small gates. On the one hand, this supports the security and control of each group of residential units, but on the other hand, they limit the possibilities of encounters and flow of inhabitants between the groups (Resident Interview, 2018) - Figure 64.

Furthermore, the vertical circulation cores provide the landing for staircases and lift shafts, while together with the collective spaces become a gathering place for residents. These are eclectic spaces, which are furnished with dining tables, chairs, greenery, sofas, TV screens and gym equipment. They provide access to shared balconies (10 Sqm each) - Figure 65.

Figure 62. View of the Threshold between Outdoor Terrace and Indoor Residential Unit © Davide Landi

Figure 63. View of a Claustrophobic Corridor © Davide Landi

Figure 64. View of an Internal Staircase © Davide Landi

Figure 65. View of a Shared Terrace © Davide Landi

The west block presents an analogous spatial organisation although on a smaller scale. Besides the different populations who inhabit the first floor from the other three, the ground floor is used as storage. Additionally, each storey combines professional caregivers' offices and changing rooms, a communal dining room, a multipurpose room as well as residential units - Figure 66. All of them result from the union of two small size apartments. For example, the dining room is composed of two spaces with diverse dimensional characters. Therefore, they offer more public as well as more intimate dining experiences according to residents' status (Professional Caregiver Interview, 2018). The privacy gradient (Cullen, 1971) has a linear sequence both at the scale of the whole building and single apartments again. Residents and visitors enter the west block though vertical circulation cores, which are placed at the north and the south sides of the building. They are then driven to the upper floors through the vertical circulation system such as staircases, and lifts. Here, residential units, communal rooms, and staff offices are mixed. In particular, the residential units have an average of 23-46 square metres each - Figure 67. They have one or two rooms with simple and compact layouts as in the east block (i.e. an entrance, detached bedroom or simple bed, living room, no private kitchen and a bathroom) - Figure 68. Again, all the residential units have a visual and spatial continuity (no corridors). Residents here do not have a private kitchen for security and safety reasons. As in the east block, each residential unit has single-person size balconies with steel rails (4.5 square metres each) - Figure 69.

Once again, corridors and vertical circulation cores constitute the two spatial elements of the west block's circulation system. According to McGlynn et al. (1985), they may represent the Rudolf©'s "hard areas." In particular, corridors are 1.2 m wide, although they have a shorter length of 50 m. They do not have openings with the negative implication on residents and professional caregivers' perception of the facility (Professional Caregiver Interview, 2018; Resident Interview, 2018). Nevertheless, the

Figure 66. View of a Staff Office © Davide Landi

Figure 67. View of a Living Room of a Standard 1-Room Apartment © Davide Landi

Figure 68. View of an Ensuite Bathroom in a Standard 1-Room Apartment © Davide Landi

Figure 69. View of a Private Terrace of a Standard 1-Room Apartment © Davide Landi

two vertical circulation cores are at the north and south side of the block. A mere change of direction of the corridor determines an enlargement of the corridor itself. It, therefore, was adapted as communal space (i.e. approximately 5 square metres). It is furnished with chairs, armchairs and a bookshelf. The small communal space splits the long corridor into two segments of 25 meters each. For safety reasons, the two vertical circulation cores are physically separated from the inhabited areas through the presence of sliding doors or steel small gates (Professional Caregiver Interview, 2018). Additionally, the vertical circulation cores provide the landing for staircases and lift shafts, while they become gathering places for residents and staff. They have shared balconies (approximately 6.5 Sqm each).

While no natural light is provided along the corridors, the residential units, as well as the communal areas, have abundant fenestration. Each one or two-room apartment has respectively one or two windows (1.5 meters x 1.25 meters). On the one hand, these let natural light to come in line with some of the principles of modern Finnish architecture, which attempted to offer a healthy environment. On the other hand, they are not coherent with the contemporary interest in environmental sustainability (Professional Caregiver Interview, 2018). Consequently, they help the residents in the perception of the passage of time and preserving a visual connection with the outside when they cannot physically participate. The communal areas and vertical circulation cores have the same kind of openings and transparent surfaces. Artificial light is required along the corridors (Professional Caregiver Interview, 2018).

The interior design of spaces such as decoration, furniture, colours is the outcome of an ongoing collaboration between residents, both older adults and young adults, and the professional staff working at Rudolf© (e.g. wallpaper in dining rooms). To tackle the institutional character of spaces such as the corridors and vertical circulation cores, they were furnished with second-hand furniture - Figure 70, as well as decorated

with works of art and craft (e.g. paintings, knitting, etc.) - Figure 71. These were the outcomes of a few clubs and recreational activities that the older adults are engaged with throughout the year. Additionally, walls of the vertical circulation cores present different murals at different levels. Once again, a partnership between residents and professional staff made these work of arts. These contribute to strengthening the colour language that differentiates each floor introduced with the latest refurbishment of the buildings. Together with the use of simple wayfinding systems such as resident and staff photographs, signs on doors should support navigation of the interior spaces. However, in all cases, there were negative comments about such spaces. Staff members and residents had a common concern regarding the physical limitations of the environments. For example, the lack of focal, or reference points negatively affects the experience of the Rudolf© for staff and residents. One informant reported that the limited number of lifts and wheelchairs lifts generates long queues, in particular, after meals (Resident Interview, 2018).

Additionally, the materiality reflects the simplicity of the modern Finnish architecture. It can be summarised mainly by white bricks or plaster walls and ceiling, together with tiling or carpet on floors. They change in colours on different storeys. The exception is the outdoor flooring of balconies. It is timber decking. Nevertheless, the senior home was built in the 1970s as a housing complex, and thereby it does not match with many of the more recent age and dementia-friendly design principles.

The green area that connects the east and the west block is an essential space for residents and staff as well as the whole surrounding community. It presents two different qualities. First: the "formal garden." It is used for recreational and collective activities during spring and summer such as "Every Thursday" barbecues (Professional Caregiver Interview, 2018) - Figure 72. Inhabitants can access it from both east and west blocks through communal interior spaces placed on their ground floor, or directly from outside.

Figure 70. View of a Second Hand Furniture which is an Outcome of Clubs and Recreational Activities that Older Adults are Engaged with Throughout the Year © Davide Landi

Figure 71. View of a Work of Art which is an Outcome of Clubs and Recreational Activities that Older Adults are Engaged with Throughout the Year © Davide Landi

It has benches, green pergolas, gazebos, a bird house and seats, barbecues, outdoor sports equipment and thereby residents can stop and admire the gardens or watch the world going by (e.g. community members doing jogging). It has asphalt paving. In the northern part, it also provides a little parking area for staff and visitors. Second, there is the "wild garden." It is a piece of existing woods, which was preserved since the 1970s. On the one side, it is difficult to experience by older residents with physical impairments - Figure 73. On the other hand, it is coherent with the modern Finnish architecture geographical sensibility while emphasising the sensorial experience of nature by residents who cannot directly experience it. Gardens, therefore, are central in residents' social life and thereby wellbeing. It was suggested by the residents that the number of outdoor activities should be increased (Resident Interview, 2018). Nevertheless, the surrounding garden is not easily accessible for residents living on the upper floors due to the lack of lifts and wheelchair lifts (Professional Caregiver Interview, 2018; Resident Interview, 2018) - Figure 74.

Living

The Rudolf© accommodates a total of 124 residents who come mainly from the Helsinki city area. Only 3% are international residents (Manager Interview, 2018). In particular, four are young adults/university students; 18 are young adults with mental impairments; 50 are older adults with later stages of mental impairments; 52 are older adults with early stages or no mental or physical impairments. The care is provided through 91 professional caregivers. They cover different aspects of care delivery such as physiotherapy, occupational therapists, social instructors and registered nurses – they have a specific dress code that frames the different professional roles at Rudolf©. Additionally, the Rudolf© offers day-care services. It is open and proposes activities to retired and unemployed of the surrounding community. A team of two professional caregivers is in charge of scouting retired older adults who live alone in the surrounding

Figure 72. View of the Formal Garden © Davide Landi

Figure 73. View of the Wild Garden © Davide Landi

Figure 74. The Rudolf's Architectural Distances. Quantification of the Distances Between the Private Apartments and the Communal Areas © Davide Landi
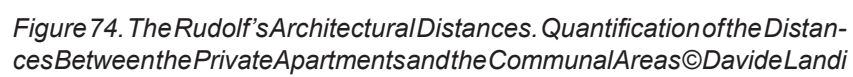
area and inviting them to take part the Rudolf©'s activities. The day-care organises clubs (e.g. knitting, Bingo, etc.) which can be freely joined by residents and people from outside the Rudolf© according to their interest. Over time, these clubs have reduced in number due to a reduction of Finnish Government economic support to institutionalised care in favour of home care. Nevertheless, the care expenses are fully covered by the Finnish Government. Furthermore, professional caregiving is integrated with volunteering by around 20 active volunteers who are mainly retired Finnish from the surrounding community. Volunteers help professional caregivers in field trips, barbecues and sometimes assist them in caretaking duties. The average stay of older adult residents is between two to four years. They move in during the very late stage of their lives that implies very often bad medical conditions. It is difficult for them also to preserve their social network as well building a new one in Rudolf©. For example, older and young residents who live in the senior home come from difficult social and economic backgrounds and thereby they have not maintained strong connections with relatives or friends. However, there are exceptions (Professional Caregiver Interview, 2018; Resident Interview, 2018; Rudolf Senior Home, 2018;).

The Rudolf© - A Home that Fits Project- started in January 2016 and attempts to tackle loneliness and stigma among both older adults and young adults. Since then, four young adults/ university students live in the same kind of residential units occupied by older adults. However, they are located in the difficult to access part of the facility. The rent is €290 per month for a single-room residential unit, while there is a cost of €470 per month for a double-room residential unit. In exchange for this very affordable accommodation, the young adults/students give to the Rudolf© between 3-5 hours per week for social work. It is a term that includes several kinds of informal activities such as joining clubs, chatting while drinking a cup of tea, baking, sewing, playing the piano, participating in dancing classes, doing shopping at the local market, going to the beach, etc. There are no guidelines about how to behave; youngsters, for instance, are

not informed about the health conditions of older residents. They could do what they feel to do.

In the beginning, these activities were not regulated by any contract or tenancy agreement. It was a reciprocal exchange between the different groups' inhabitation of the senior home underpinned by a trust (e.g. young adult residents have a copy of the keys that allow them to enter the Rudolf© at any time), responsibilities, and "principles of good will." The Rudolf© implies some lifestyle changes for young residents, although it has positive effects on their as well the older residents' wellbeing and independence (Professional Caregiver Interview, 2018; Resident Interview, 2018; Rudolf Senior Home, 2018; The Guardian, 2017; CityLab, 2015; CNN, 2016; Agi, 2017). In this, young adult/ university students spend conventionally one year. The one-year tenancy was chosen because it is the average tenancy term in Finland. Additionally, the one-year stay allows the manager to understand if the young residents fit in the housing solution or not, and thereby young residents are motivated to do their best. Nevertheless, in a one-year stay, anything can happen. For example, one of the young residents was particularly close to his/her older neighbour. However, the older resident passed away; inevitably, this had emotional and psychological implications on the young resident. While the young residents do not attend any first aid, fire security or training course, the Rudolf© provides them with expertise in psychological support. As one interviewee said: "They should be ready and emotionally strong to handle these situations" (Professional Caregiver Interview, 2018). One concern expressed regarding the Rudolf© by the Helsinki political and ruling class was whether the younger residents would imply a reduction in the number of professional caregivers and thereby create a job loss (Manager Interview, 2018; The Guardian, 2017; CityLab, 2015). Consequently, young adults/university students must not have a medical or health/social care educational background.

The Rudolf© housing solution attempts to fill a gap due to older adults' isolation and the young adults' homelessness. In all cases, the informants reported that the young residents bring new life to the Rudolf©. Talking about this aspect, participants commented: "It has been very uplifting for the spirits – I am excited when I get a visit, and everyday life is not so boring." Another interviewee put it: "a lot of older residents tell me that they are so lonely, and it isn't the same to have nurses because they are here as a job – it would be great to have more young people around for them to talk (The Guardian, 2017). Even if older adult residents have access to newspapers, magazines, social networks (e.g. Facebook©), while they can use electronic devices such as smartphones, televisions (Professional Caregiver Interview, 2018), another old lady said that she hopes that they bring some modern ideas and some new life into the Rudolf© because old people do not go out that much. On the one hand, the interaction between the two age groups allows them to learn from each other. One respondent said: "It is cool to live here. I have become more sociable, and I like hearing the older people's stories. It has also taught me to appreciate my health and youth." Another young resident continued: "At first, I had some doubts – what if it becomes like work and I get tired of it? But I can decide by myself what I want to do and with whom. Everyone is very open and happy to see me that it does not feel like work at all" (The Guardian, 2017; CNN, 2016, Agi, 2016; Stories, 2016; Resident Interview, 2018). Another participant also confirmed this: "I was concerned about my privacy. However, I spend most of the time with an older resident who lives in the other block, and in a certain sense I feel more independent" (Resident Interview, 2018). On the other hand, it reduces the institutional perception of the facility (Resident Interview, 2018; Rudolf Senior Home, 2018). In this, young adult residents strengthen their social role by giving their "free time" to older residents (Professional Caregiver Interview, 2018; The Guardian, 2017). For example, a 19 years old resident enjoys reading aloud the newspaper, drawing and painting illustration from her favourite book, and baking cinnamon rolls together with her 82-years old neighbour. Additionally, older and

young residents go to concerts and singing together or just chatting while drinking a coffee (The Guardian, 2017). When talking about this, a participant added: "During the midsummer festival celebration, we had a big party in the central green area. People such as young families and children from the kindergartens of the surrounding area joined the midsummer party" (Resident Interview, 2018). In Easter, children and older residents look for chocolate eggs together around the central green area. Additionally, the older residents are taken on field trips such as local kindergartens to spend free time with children. This helps older residents to preserve a more rounded social and spatial understanding of the surrounding neighbourhood, and thereby to experience it occasionally independently (Resident Interview, 2018). When the participants were asked about this cross-generational setting and its related activities, the majority commented that it has positive effects on residents with early stages of dementia' wellbeing (i.e. older participants have reduced their medications) and on the professional care provision (Resident Interview, 2018). Participants are aware of it and are less concerned to move into such an institutional setting. In this, most of the activities are the outcome of a monthly-shared decisional process between the manager, professional caregivers, young and old residents - Figure 75.

Furthermore, the Rudolf© is an incubator of socio-economic benefit. One of the students, for instance, could save money and thereby moved out after a one-year stay to live in Helsinki city centre (The Guardian, 2017; Resident Interview, 2018). However, this innovative housing solution might have some implications. For example, the initial popularity of the project attracted national and international mass media. However, only a few residents could deal with the press due to lack of language skills or mental impairments. Therefore, younger and older residents were exhausted by numerous interviews and media requests, which clashed with their personal life. Also, not all the younger residents fit with the Rudolf©'s principles. Two of the students, for instance, while showing a genuine interest in the model and motivation in taking part during the
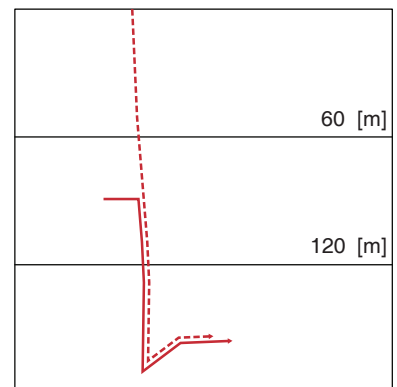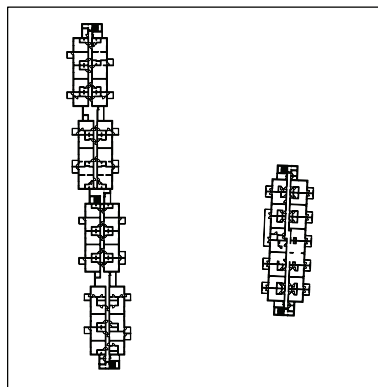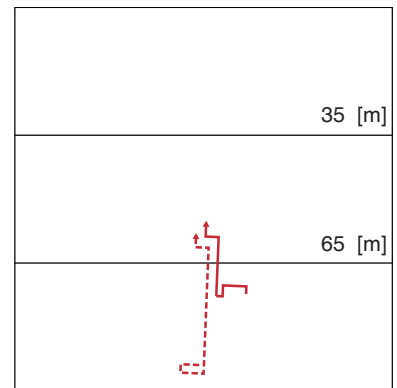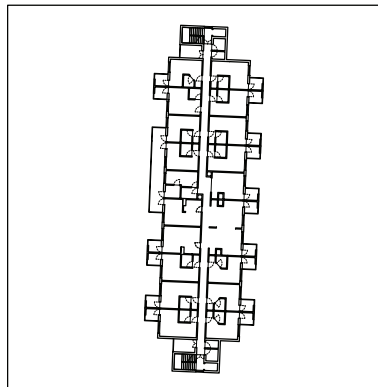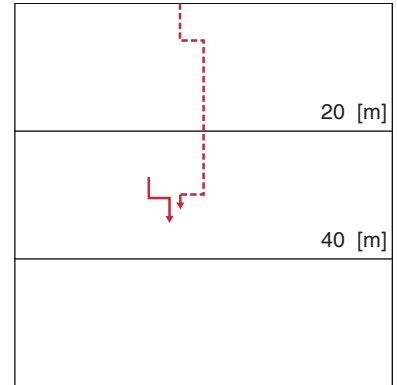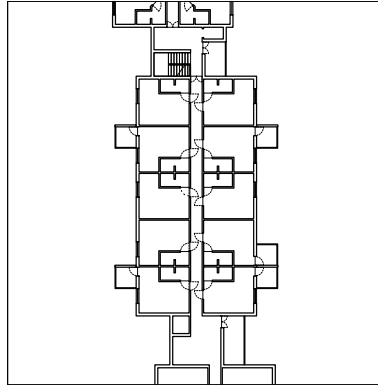
Figure 75.The Rudolf's Movements through Spaces. It Illustrates the Movements Towards Spaces of Encounters between Different Age Groups. The Dashed Line Represents Young-Adults' Movements, while the Continuous Line Represents Older-Adults' Movements © Davide Landi

interview process; could not effectively contribute to the Rudolf© while they stayed due to personal problems. Talking about this issue, an interviewee said: 'We barely saw them around the facility.' In this, the manager decided to interrupt their stay, while clarifying the core rules of the housing solution for future guests. First, the one-year stay was officialised with a contract in which the volunteering contribution and its number of hours were adequately defined. Second, the one-year stay can be further extended. While talking on this theme, two different and often conflicting discourses emerged.

On the one hand, some of the participants argued that the one-year stay was too short to build a meaningful relationship between younger adults and older adult residents. In most of the cases, this is young adults' first stay outside their domestic settings which overlaps with the peculiarity of a senior home. On the other hand, some other participants acknowledged the complexity of the particular configurations, although they stated that the possibility of building meaningful relationships lies in younger residents' networking skills. Thirdly, the manager asked younger residents to have a diary of the activities as a record while using social networks such as Instagram© to record their volunteering digitally. On the one side, younger residents have to ask permission before publishing any pictures. On the other side, the manager and political class can be easily updated on Rudolf©'s life (Manager Interview, 2018).

This section provided an insight to the Rudolf©'s settings in Helsinki (Finland). The Thinking revealed the intellectual work both of the architect of the case study and the Helsinki Department of Youth. It started 'A Home that Fits' project to question new housing solutions for homeless young adults. The Making explored the Rudolf©'s physical settings. This analytical segment described the spatial consistency of the case and its evolution over time. The Living focused on relational patterns between professional caregivers, young residents, volunteers, and old residents. In this, the three lenses of the investigation, Thinking Making and Living, attempted to empirically

Figure 76. The Rudolf's Axonometric View © Davide Landi

untangle the relationship between spatial, social and care provision dynamics. To complete the finding section, therefore, the following chapter presents the third case study, the Gojikara Mura©. It contributes to the constitution of a robust background to support nascent theoretical discourse on architectural types in contemporary culture - Figure 76.

Section 3: The Gojikara Mura© Settings in Nagakute (Japan)

Architect: Oi Koji

Year: 1987

Location: Nagakute, Aichi, Japan

Typology: Nursing Home, Kindergarten, Assisted Living, Community Centre, Secondary School/Vocational School, Nursing school, Café/Restaurant, Art and Craft shop/ workshop, and Children Day-Care Centre - Figure 77.

Interview N.	Interview Type	Business/Profession	Role
1	Business/Management	Housing Provider/ Care Provider	Manager
4	Business	Housing Provider/ Care Provider	Staff
1	Design	Architect	Project Manager
4 and 4	Users	Residents	Students and Families

In the 1960s, Japan was characterised by a very rapid urbanisation, in particular in large urban centres such as Tokyo, Osaka, Nagoya, Yokohama, Kyoto and Kobe (Fukutake, 1989). This has determined a unique urban diversity. This urban diversity has not been a consequence or governmental urban planning (Kishii, 2015), but instead it was the translation of social relationships over time. For example, during Togukawa period the nobles were sited in concentric areas surrounding the capital Tokyo according to their relationship with the emperor (Hall, 1969). This urban diversity produces an urban feeling of "All sense of distances are confused: that which is near seems far, the large
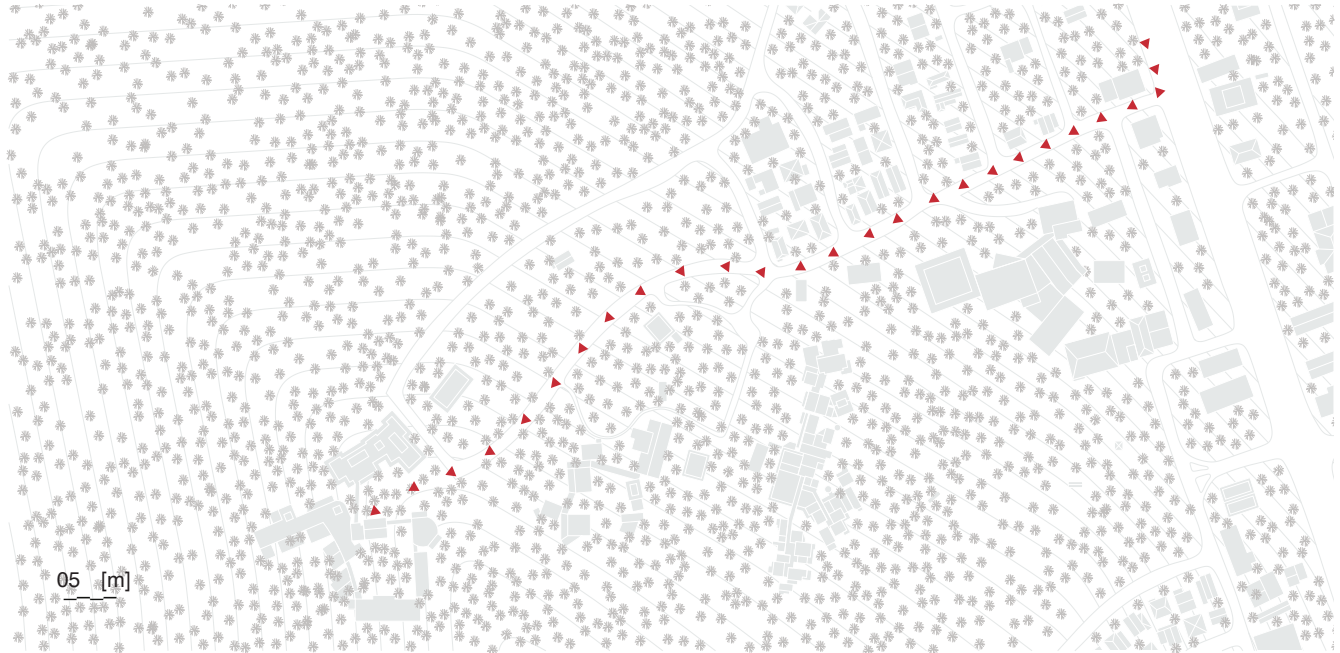
Figure 77. The Gojikara Mura's Serial Vision. It Illustrates the Journey from the Closest Tram/Bus Station to the Main Entrance of the Nursing Home © Davide Landi

seems small" (Radovic and Boontharm, 2012, p. 6). The "smallness" did not start in metropolitan areas. However, the sense of smallness was inherited from the physical setting of the "MURA" concept. "MURA" is the Japanese term for village system (Fukutake 1989). It indicates a kind of commune where its members support each other in any aspect of their lives, and take part in reciprocal exchange of help in case of socio-economic difficulties. "MURA," therefore, is not only a geographical location of a housing group, but it also identifies a village's complex substratum of socio-economic and political organizations (Hisano et al. 2018; Fukutake 1989; Nakane, 1970). These notions are also embodied at the architectural scale. A house, for instance, is the space in which social interplay and rituals happen (Ozaki, 2002).

At this point, it is possible to introduce the Japanese notion of privacy. On the one hand, the notion of publicness existed since the ancient times. On the other hand, there is no Japanese word for expressing the concept of privacy. Consequently, the notion of sharing spaces with others is different from western countries (Hall, 1969; Elliot, et al. 2013). In fact, the privacy notion matches the concept of self; the self usually is identified with his or her own family. For example, parents and children sleep together in the same room. The sense of "smallness," the cultural matrix, and the interplay between public, private and nature have had direct repercussions on the conception of the space (Ozaki, 2001). The extension, for instance, of interior spaces towards the outside blends the public and the private domains. This generates "in-between" spaces in which the spatial volume is not determined by surrounding objects, although it is shaped through a balancing process which attempts to emphasize the perception of depth (Radovic and Boontharm, 2012). This together with a sense of aesthetics based on simplicity and ornament (Kurokawa, 1988) have formed the built environment (Ozaki, 2002; Ozaki, 2001). It, thereby, has an "elegant frigidity" (Tanizaki, 1977). The Japanese roof acts as a "parasol" which casts a shadow on the ground. The sense of aesthetics as well as the lack of spatial clarity is generated also by nuances of

this shadow. This apparently confuses western people while suits perfectly with the Japanese expression of inhabiting. Nevertheless, domestic environments have gone through a process of contemporisation although the traditional features are still present (Ozaki, 2002).

The Gojikara Mura© settings embody all of these which also affects its possible inhabitation of it (Ozaki, 2002). Yet, some of these issues are inevitably further illustrated. They clarify the diverse Japanese contexts. Nonetheless, the structure of this sections grounded in the idea of avoiding the danger of ethnocentric focus over explanation or care policy/models over conviction. The aim is to describe the physical settings and spaces of the case study as a transposition of an innovative care model, and how these settings and spaces are used by the residents, volunteers and staff. The description is thereby untangled through three themes. They are: (a) Thinking; (b) Making; and (c) Living. The temptation to describe everything in terms of cultural notions or national care strategies is therefore contained. However, this alternate notion of inhabiting will definitely help us to question in depth our western notion of it (Tanizaki, 1977).

The Gojikara Mura© is placed in Nagakute. It is a town in the eastern part of Nagoya, in Aichi prefecture. Nagakute counts a population of 57,764 people. In detail, it occupies an area of 25,55 sqKm with a density of 2,680 people/sqkm. The contemporary city occupies a site where the "Komaki-Nagakute Battle" took place in 1584. In 2005, Nagakute hosted the World Expo. This brought to the city a new wave of popularity (Japan Travel, 2017; Welzel – Connolly, 2014).

The name Gojikara comes from the Japanese word "GOJI", meaning '5.00 o'clock' and "KARA", meaning 'after' so: "after 5.00 o'clock". In 1981, Mr Yoshida Ippei (Chairman) opened a Children's Day-Care centre. Six years after, the Children's Day-Care centre

was extended with a nursing home for older adults with different levels of physical or mental impairments coming from different surrounding areas. The mixture of different kind of services and thereby age categories would generate positive effects on children and older adults' lifestyles and wellbeing. In the following years, these have been integrated with other older adults' care and community services such as a kindergarten, an assisted living area, a community centre, a secondary school. (Anderzhon et al., 2012) Nowadays, it is a diverse village, embedding the socio-cultural notions and organisation of a "mura." The different facilities are deployed around the south-east edge of Ryokuchi Greens Prefectural Park (Natural Reserve) - Figure 78. The area is accessible by pedestrians and cyclists. Only Gojikara Mura and motorised residents can enter in the village area, together with some required public service means. The narrow streets are 2.5 – 3 meters wide and not paved (the only street presenting asphalt is the one going to the main entrance of the nursing home), but shaded by secular trees. Visitors, volunteers, and professional caregivers have to park their vehicles in the car park at the edge of the property, besides the residential area for young families (Anderzhon et al., 2012). Along the unnamed main road, which is vehicles accessible, it is possible to find a bus stop, a shopping area, a medical clinic, a library, another primary school, a hairdresser, and a restaurant. They are respectively at 210 meters, 660 meters, 335 meters, 540 meters, 250 meters, 380 meters, and 660 meters far from the village. Nevertheless, the Gojikara Mura area does not have a sidewalk, but the unnamed main road has a sidewalk with a width of 4.5 meters - Figure 79.

Thinking

The "Gojikara Mura" operates as an ensemble of different facilities according to the notion of "mura" as group buildings (Fukutake, 1989). The Children's Day Care Centre, built in 1981, was the first facility realised and service provided - Figure 80. In 1987, Mr Yoshida Ippei, founder member, commissioned the nursing home to Oi Koji. Mr

Figure 78. The Gojikara Mura's Site Plan © Davide Landi
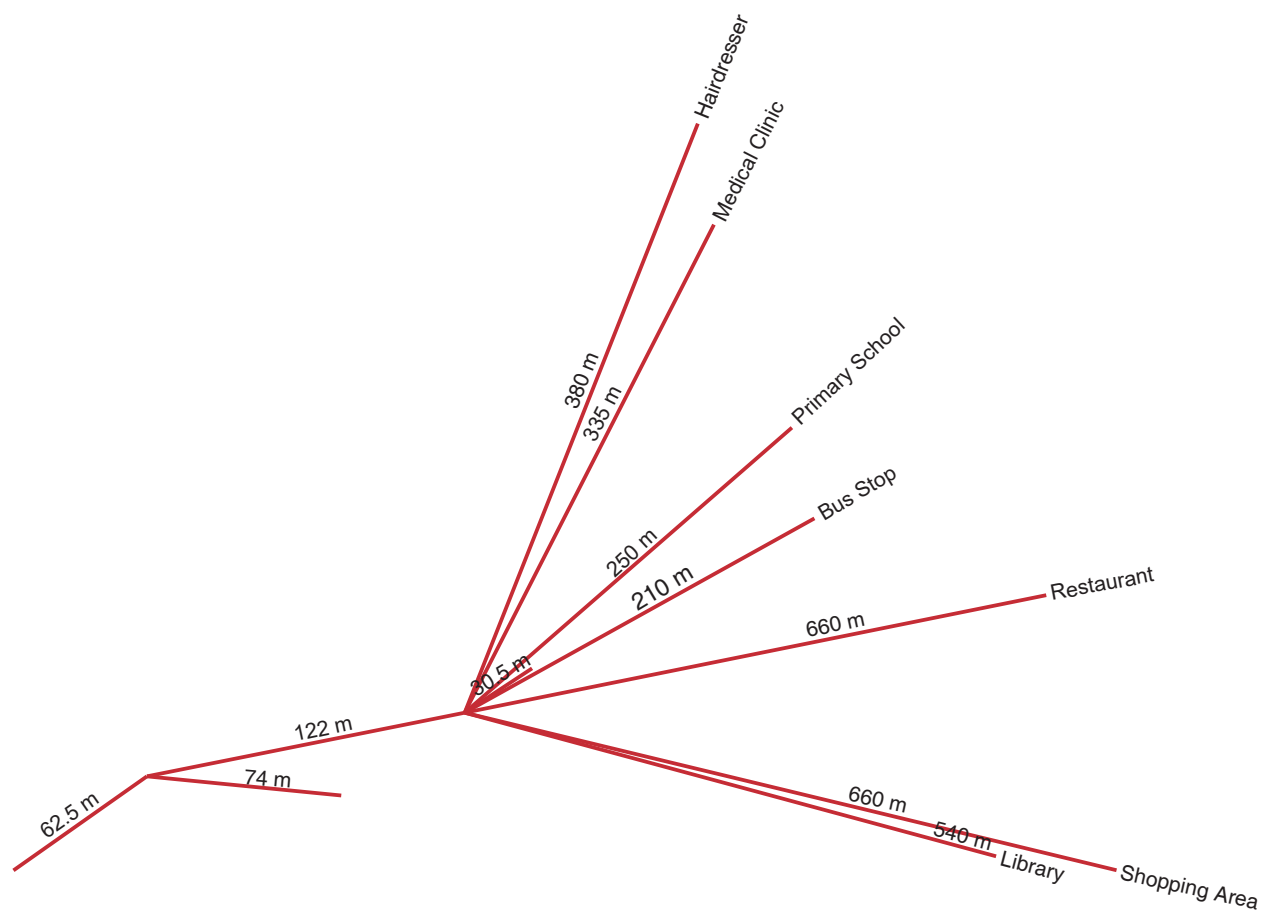
Figure 79. The Gojikara Mura's Urban Distances. Quantification of the Distances Between the Case Study and the Main Urban Features such as Bus/Tram Stations, Churches, Shopping Area, Markets, etc. This Defines the Scale of the Community © Davide Landi

Figure 80. View of the Central "Gata-Gata" Courtyard which is Shared by the Children Day-care Centre and the Nursing Home © Davide Landi

Yoshida's vision started having a more physical consistency. At that time, the architect was still a university student and doing research in older adults' architecture. Architect Oi Koji had the chance to live there for six years while working on Yoshida's vision of architectural design (Designer Interview, 2017, b). In fact, the founder member wanted to create a forward-looking care model fostering diversity and interaction between different age categories.

The Mura is totally different from more traditional models (facilities) that he could visit over time. The latter were models that focused on vertical management and efficiency instead of people (Ito, 2004). The "Gojikara Mura" would create a strong sense of a community, a "mura" which has a central role in residents' daily lives. This is irrespective of any physical or cognitive impairments. The "Gojikara Mura" would allow residents to develop meaningful relationships between them and people from outside. It maximises this possibility of perceiving the surroundings, and being perceived by the surroundings. It is a place for everyone, a place where people are "happy" and their "hearts move/ beat" (Manager Interview, 2017, b; Anderzhon et al., 2012; Welzel – Connolly, 2014; Ito, 2004). In this context, the "Gojikara Mura" provides a frame in which older adult residents are not isolated. They are instead an integral part of the community, and share spaces with different age categories of the village. This is a possible way for "embracing diversity" in a multigenerational environment (Anderzhon et al., 2012; Manager Interview, 2017, b). In fact, visitors experience the sound of children in nature at first. Consequently, older adult residents preserve their "normal life-styes" within the "Mura." To emphasise this idea of a "normal community", people (i.e. professional caregivers, volunteers, visitors, students, etc.) are invited to slow down their lifestyle paces. They dive into the "rhythm of the village" which is suggested by older adults' rhythm: a "slow life" (Ito, 2004). Additionally, staff members are requested to approach their work with a relaxed attitude, so that staff and residents' distress symptoms are avoided. These positively contribute in building good relationships among the

different categories of individuals, free from any time constraints (Ito, 2004; Anderzhon et al., 2012). Furthermore, the "Gojikara Mura" grasps the notion of "imperfection" central in the production of a liveable surrounding. Additionally, "GOCHA-GOCHA" is the Japanese term for describing this "imperfection" that fosters interaction and participation (Designer Interview, 2017, b).

Oi Koji, therefore, designed a series of facilities far from big institutional care buildings. Additionally, they are far from more conventional older adults' long-term care facilities, which are underpinned by the notions of efficiency, convenience and hygiene. They echo the Japanese domestic scale and settings, and their peculiarity spatial ambiguity (Anderzhon et al., 2012; Designer Interview, 2017, b). The Mura are domestic settings in which the sense of "smallness" is strong (Radovic and Boontharm, 2012), and often do not satisfy accessibility requirements, but residents can adapt them in order to accomplish their needs. The "Gojikara Mura" deliberately has some not "accessible or inconvenient" areas by adopting concepts such as "GATA-GATA" (Japanese word for a zig-zag, a very complex shape) (Designer Interview, 2017, b). This formula encourages residents, visitors and staff to ask support each other. It is a manifesto to people's interdependency that optimises the possibilities of discussions. Consequently, the "Gojikara Mura" frames an informal environment open to surrounding communities, and non-professional caregivers. For example, 'imperfect buildings' allow volunteers to actively contribute in the facilities' maintenance even if lacking professional skills; or mothers can bring their children to the kindergarten or children's day-care while undertaking conversations about arrangements of the living environment with older residents (Anderzhon et al., 2012). In a contemporary society in which the necessity of improving efficiency brought to a spatial and social specialisation and thereby segregation. According to Mr Yoshida's word, only logic and the correct answers have value in a country designed by time to pursue economic profit but not people wellbeing. Instead, the notion of "waste" generates a place for everyone in the "Gojikara

Mura" (Manager Interview, 2017, b). Everything has its importance and everyone can participate. This notion comes from the Japanese word "MUDA"/spatial waste (Manager Interview, 2017, b). This is a word that in Japanese is commonly associated to "ZATSU" (the literal translation is rough/crude) which traditionally has a negative meaning (Ito, 2004).

Furthermore, the relationship with the natural environment is fundamental at the "Gojikara Mura." After retiring from a trading company, Mr Yoshida while volunteering as a fire inspector in his hometown developed the desire to protect a natural environment (a wood) inherited from his father. This piece of land was of such importance in his childhood experience, and thereby its preservation brought about the creation of the multigenerational village with a mixed population (Manager Interview, 2017, b). The village was built with Mr Yoshida's rule in mind: "to remove the building's eaves rather than cutting off a single branch" (Ito, 2004). In fact, there is no urban logic behind the village except to minimise the impact on the existing natural environment - Figure 81. Additionally, its experience is essential for children and older adults. Sensing directly the nature through the smell, the sight, the hearing, the touch and sometimes the taste is more important than another form of education and treatment (Manager Interview, 2017, b). In this way, the adjacent housing development was stopped, and the identity of that place secured (Anderzhon et al., 2012). This idea of preservation has been mirrored also in terms of building a tradition. In fact, when two farmhouses were about to be demolished, "Gojikara Mura" acquired them, and the farmhouses were relocated from the surrounding areas to the multigenerational village.

These settings definitely do not fall in a conventional scheme. Even if the "Gojikara Mura" focuses on the older adults' care, it has combined a series of different services over time such as a kindergarten - Figure 82, a secondary school/vocational school - Figure 83, nursing school - Figure 84, a nursing home - Figure 85, a home care

support centre, a children's day care centre, an assisted living housing - Figure 86, a community centre - Figure 87, Figure 88. Together with an organic restaurant - Figure 87, and an art and craft shop in the village's campus open to visitors and relatives - Figure 88, they generate an environment that fosters a sense of normality (Ito, 2004; Anderzhon et al., 2012). This is a complete mixture according to the Japanese word "GOCIAMAZE" (Designer Interview, 2017, b).

Over recent years, Mr Yoshida has applied the same notions and care philosophy to other facilities in Nagakute city. For example, the Aichi Tayiho Yochien is a kindergarten that fosters a strong relationship with nature; Respite House Yasasiitokoro in which a needed person and his/her family spend time together; the Hodo Hodo Yokocho and Bochi Bochi Nagaya is an older adults daycare centre/nursing home and a professional caregivers' office. Here four ladies/students, one family and 13 older adults with dementia live together. The building has only one entrance in order to maximise the possibilities of encounters. The ladies and the family receive economic benefits while providing support to the older residents. Lastly, the Daitai Village is a small-scale home for the aged. The staff and a family cooperate and support an old person's life. It is a small place with a capacity of 29 people (Designer Interview, 2017, b; Anderzhon et al., 2012).

Making

The village has a total area of 50,000 Sqm (Anderzhon et al., 2012). The different buildings that compose the village are nestled on a slope with a difference in height of 10 m. Additionally, the buildings have a complex articulation driven by the notion of preservation. In fact, the position of existing trees shaped buildings' layouts and volumes which compose the village. They fragmented the visual perception of an institutional facility. This also affected the construction process, which was extremely

Figure 81. View of the Relationship between Lnadscape and the Gojikara Mura © Davide Landi

Figure 82. View of the Gojikara Mura's Kindergarten © Davide Landi

Figure 83. View of the Gojikara Mura's Secondary School/Vocational School © Davide Landi

Figure 84. View of the Gojikara Mura's Nursing School © Davide Landi

Figure 85. View of the Gojikara Mura's Nursing Home and Home Care support Centre © Davide Landi

Figure 86. View of the Gojikara Mura's Assisted Living Housing © Davide Landi

Figure 85. View of the Gojikara Mura's Community Centre © Davide Landi

Figure 88. View of Children Playing at the Community Centre © Davide Landi

Figure 89. View of the Gojikara Mura's Organic Restaurant © Davide Landi

Figure 90. View of the Gojikara Mura's Art and Craft Shop © Davide Landi

complex (Ito, 2004). The construction company could neither lay the ground nor cut the trees' roots. Nevertheless, the nursing home constituted of two detached buildings connected by a floating bridge is a three-storey facility (basement, ground floor and first floor). The assisted living housing is a four-storey facility made of several scattered buildings connected by enclosed passageways. Both of the facilities have reinforced concrete structures (Designer Interview, 2017, b; Ito, 2004). The kindergarten, the community centre, the café, the art and craft shop, and the vocational/nursing school are one-storey wood structure facilities composed of different pavilions that perfectly interact with the natural environment (Designer Interview, 2017, b). The village provides also a parking surface for 50 cars (Anderzhon et al., 2012). From here, a bus service is available to students or older residents with a higher level of physical impairments. The first facility was completed/opened 31 years ago; the latest one in 2003 (Ito, 2004).

The vehicle-accessible street stops opposite to the main entrance of the nursing home (AICHI TAIYHO NO MORI). There is no entrance gate, just a designed station occasionally occupied by volunteers. Visitors very often question about security because anyone is able to enter. The robust social and interrelation patterns between families, volunteers, professional caregivers are what was defined by Jacobs (1961, p. 36) as "the eyes on the street." Otherwise, the use of walls, a "walled facility," would be against the founding principles of an open facility towards the surroundings (Professional Caregiver Interview, 2017, b). The nursing home is composed of two volumes connected by a floating steel bridge - Figure 91. The bridge connects the last floor of the south block to the roof terrace/garden of the north block. The south block has a particular volumetric composition. The monolithic volume is carved by a central green courtyard, called "Gata –Gata garden" built in line with the Japanese "Gata-Gata" notion (Designer Interviews, 2017) - Figure 92. The courtyard physically and visually connects the Children's Day Care centre (managed by a different company) and the Nursing Home - Figure 93. It becomes, therefore, one of the places of interaction

Figure 91. View of the Steel Floating Bridge © Davide Landi

Figure 92. View of the "Gata-Gata" Garden © Davide Landi
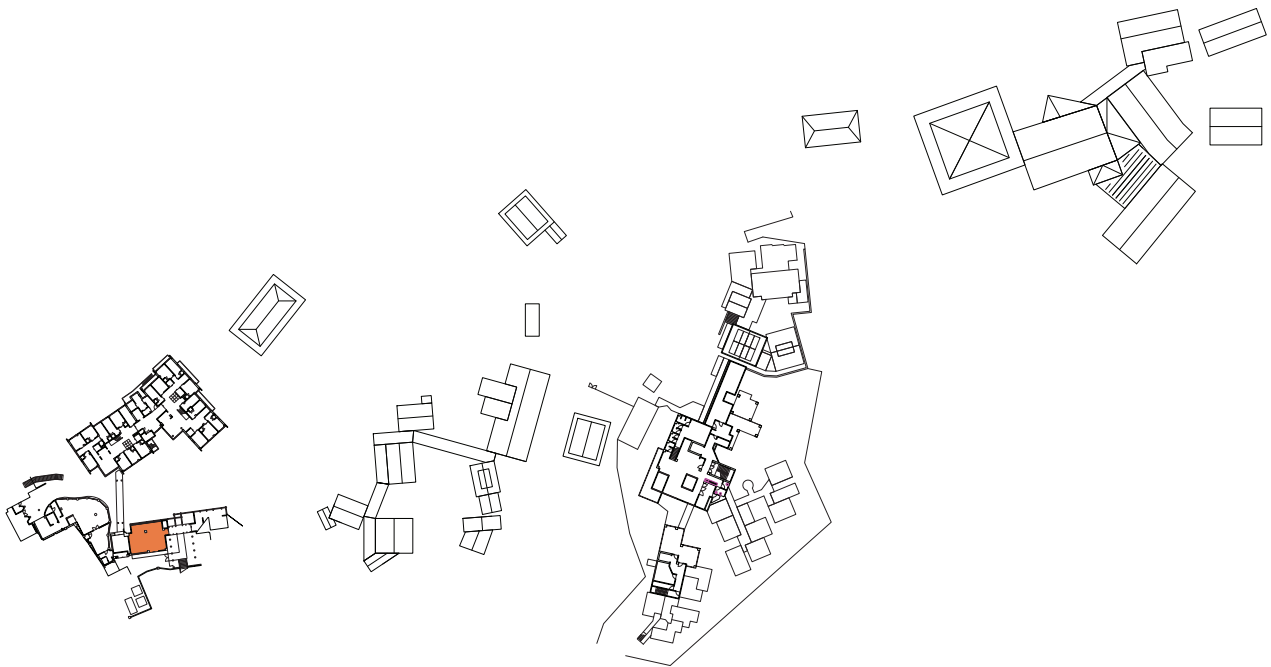
Figure 93. The Gojikara Mura's Children Day-care Centre © Davide Landi

between the two different age categories. According to Mr Yoshida's principles and a restrictive building regulation protecting the natural reserve, the monolithic building is split in smaller volumes (two storeys volumes with pitched roofs) soon as the natural environment becomes more dense and thereby prevalent - Figure 94. These volumes host the residents' bedrooms. They accommodate from one to four older adults, according to residents' economic possibilities. They have an average area between 16 – 8 Sqm (Designer Interview, 2017, b; Professional Caregiver Interview, 2017, b; Anderzhon et al., 2012) – Figure 95, Figure 96. They are essential (just a futon – Japanese traditional bed or a medical bed is provided). Residents, thereby, can customise them and use them in different manners during different moments of the day. For example, a bedroom during the night-time becomes a living room in the daytime. Initially, removable curtains divided the space of the shared bedrooms. Just recently, Japanese cedar wooden walls were introduced, and thereby residents have more privacy (Professional Caregiver Interview, 2017, b) - Figure 97. The bedrooms are connected through a 1.6 m wide corridor. In fact, it has a very central function in the daily life of residents. The architect designed the corridor according to the "Gata-Gata" concept and thereby it is not straight (Designer Interviews, 2017, b; Welzel – Connolly, 2014). This particular enclosed geometry provides different kind of spaces. On the one side, there are small, private spaces. On the other side, there are public, collective spaces. Therefore, residents are able to practice their interiority, observational cruise or exteriority, and it allows the work of memory to go on (GSD, 2016). These trigger curiosity, participation and interaction among residents, professional caregivers and volunteers. For example, one interviewee said: "No straight is fun." In fact, what cannot directly be perceived by the sight stimulates different groups of people to move around the facility and interplay. Therefore, the building has "hiding spaces," which is counter-balanced by a minimum of the use of doors in communal spaces - Figure 98. Doors conceptually and physically separate and divide, and this clashes with the notion of openness on which the village is grounded - Figure 99, Figure 100.

Figure 94. View of the Gojikara Mura Nursing Home's Small Units which Accommodates the 4-Bed Rooms © Davide Landi

Figure 95. View of a Gojikara Mura Nursing Home's 4-Bed Room © Davide Landi

Figure 96. View of a Gojikara Mura Nursing Home's 4-Bed Room © Davide Landi

0   0.5   [m]
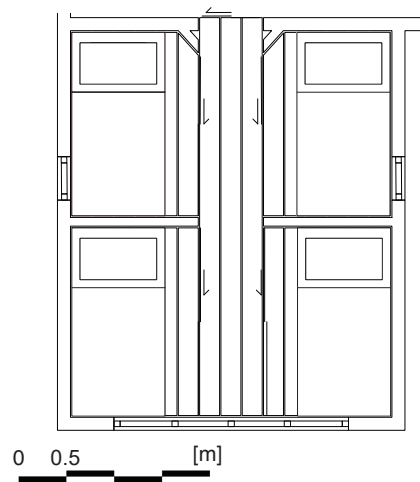
Figure 97. Standard
4-Bed Room Floor
Plan © Davide Landi

Figure 98. View of a Gojikara Mura Nursing Home's "Gata-Gata" Corridor © Davide Landi
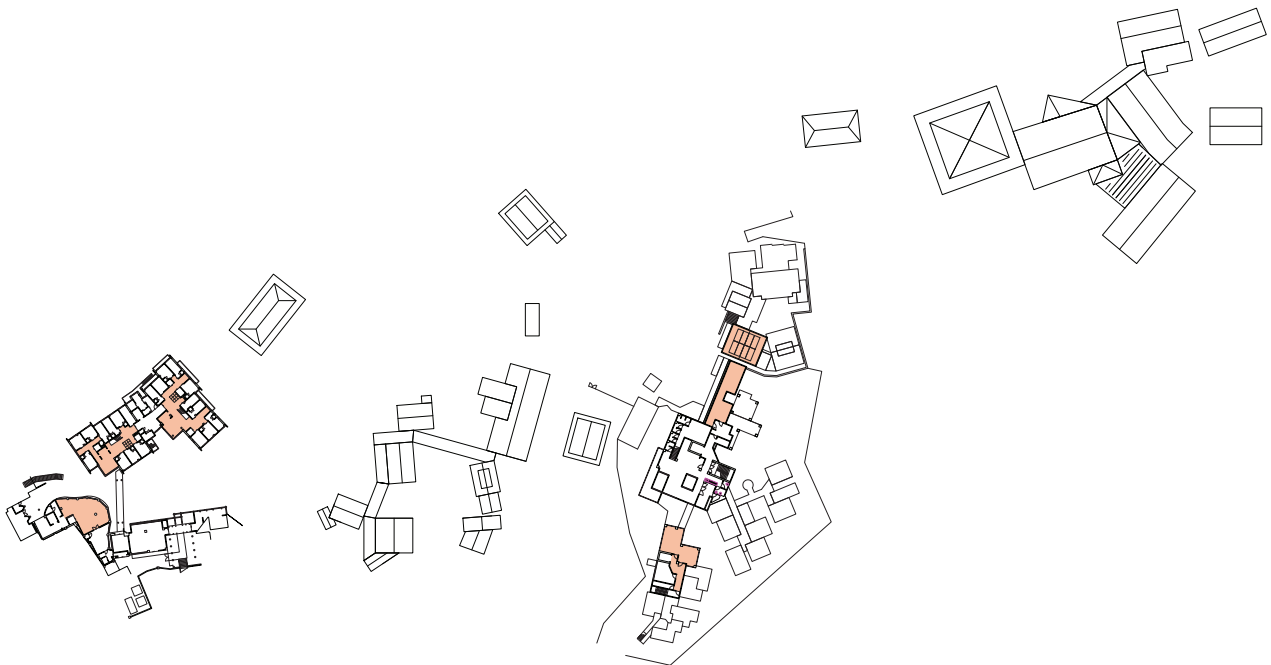
Figure 99. The Gojikara Mura's Communal Areas - Ground Floor © Davide Landi

Figure 100. The Gojikara Mura's Communal Areas - First Floor © Davide Landi

Far from more efficient older adults care facilities, the institutional perception of the Gojikara Mura© is strongly reduced. The corridor is central to residents, professional caregivers, and volunteers' social pattern. They spend most of their time there. It generates the opportunity for meetings. The layout allows groups of eight bedrooms to be sharing gathering places. Some of them are informal gathering places characterised by simple minimalistic wooden furniture such as chairs, benches, etc. – Figure 101. Others are more formal. For example, there is a small library at the first floor opposite to the floating bridge - Figure 102; or a multifunctional room always at the first floor for parties, playing musical instruments, etc. It can be used without any reservation. These are obviously used by to the whole community - Figure 103. Fundamental is the role of corridors also for the residents presenting later stages of dementia. They can easily wander (Professional Caregiver Interview, 2017, b) - Figure 104. Additionally, the Japanese public bath can be found in the basement. At the entrance, there is a sign indicating that water arrives from a natural spring but this is not true - Figure 105. These kind of "white lies" contribute to "heart's move/beat" for those community members who rarely leave the village. This falls in the theoretical framework of "therapeutic lies" (James et al, 2006; McElveen, 2015). However, way findings such as pictures, objects or names on rooms' entrance, together with the constant presence of handrails on all the perimeter walls, and gentle ramps support residents' horizontal navigation. Unfortunately, some of the staff argued that the handrails' material matches with the finishing material of the walls. Residents thereby have visual difficulties which limits also their use (Professional Caregiver Interview, 2017, b).

Another important space for the communal life is the recreational/dining room - Figure 106, Figure 107. It is a double height space, which hosts a café/restaurant. It is open to the public. Mothers and children, for instance, can just stop by to eat their lunch boxes; or relatives, and residents of the surrounding areas can have a coffee and relaxing time with the residents, volunteers and professional caregivers. Here, the

Figure 101. View of a Gojikara Mura Nursing Home's Communal Area © Davide Landi

Figure 102. View of the Gojikara Mura Nursing Home's Library © Davide Landi

Figure 103. View of a Gojikara Mura Nursing Home's "Gata-Gata" Corridor © Davide Landi

Figure 104. View of a Gojikara Mura Nursing Home's Communal Area © Davide Landi

Figure 105. View of the Gojikara Mura Nursing Home's Japanese Traditional Bath - Entrance Door © Davide Landi

Figure 106. The Gojikara Mura's Restaurants and Dining Rooms - Ground Floor © Davide Landi

Figure 107. The Gojikara Mura's Restaurants and Dining Rooms - First Floor © Davide Landi

furniture such as dining tables, chairs, televisions can be easily moved ("Soft areas", McGlynn, et al., 1985) according to the planned recreational activities - Figure 108. The notion of "imperfection" is mirrored also in the furniture. In fact, each piece of furniture must be diverse from another (Designer Interview, 2017, b) - Figure 109. The architect distributed the "hard areas" such as toilets, storages, two elevators, four staircases along different sides of the "GATA-GATA" corridor - Figure 110. This support inhabitants' accessibility. The café/kitchen counter (staff use it for preparing meals and tea) is placed on one side of the recreational/dining room (McGlynn et al, 1985). Even if the peculiarity of the site has strongly affected the layout of the building, the privacy gradient has a linear development (McGlynn et al, 1985).

The main entrance is placed at the basement level. It does not have a reception desk, but an entrance/café. It has chairs and a big table where visitors, residents, volunteers can stop and talk and characterise the space. Consequently, different groups of occupants can freely enter or leave the facility - Figure 112. In this, also the workstations/desks of the managing staff can be found. This is immediately followed by another communal space, which provides the access to the Japanese public bath as well as pet retreat (there is a dog in the nursing home). From this communal area, an elevator and a staircase take residents, visitors and professional caregivers to the ground and first floors. Inhabitants can therefore access the "GATA-GATA." It, simultaneously, acts as gathering, connecting and buffering space between the private rooms and the communal areas. In particular, the ground and first floor have three four-bed rooms and 26 one-bedrooms, they and recreational/communal areas are distributed around the five segments that form the "GATA-GATA" corridors. This encloses circulation, visual and physical continuity, and together with the absence of thresholds, facilitates the interior navigation to residents who might present physical and mental impairments. Additionally, the elevators' doors as well as the staircases' steps have different colours on each floor (Professional Caregiver Interview, 2017, b).

Figure 108. View of the Gojikara Mura Nursing Home's Dining Room/Restaurant which is Open to the Public © Davide Landi

Figure 109. View of a Gojikara Mura Nursing Home's Communal Area which Shows the Notion of Imperfection (i.e. "Gocha-Gocha") © Davide Landi

*Figure 110. View of a Gojikara Mura Nursing Home's Internal Staircase © Davide Landi*

Figure 111. View of the Gojikara Mura Nursing Home's Main Entrance which Combines Staff Workstations and "Entrance Café" © Davide Landi

The north block has a more compact layout. It presents a central shared entrance that guides the residents and visitors towards the two different units. In here, there are staff changing rooms and toilets, and the elevator. Each unit accommodates ten single bedrooms per floor (two floors in total). The minimal are distributed around a central communal/multipurpose space (i.e. dining table, living room, tatami, etc.). There, the hard areas (McGlynn et al, 1985) are clustered: the bathroom, the kitchen, the laundry, the professional caregivers' workstation (the virtual infrastructure), and a central staircase, which connects the two floors. Other two external staircases directly connect the outdoor garden to the roof of the block - Figure 112, Figure 113. However, they allow youngsters and children to take care of the vegetable garden on top (Professional Caregiver Interview, 2017, b; Welzel – Connolly, 2014) - Figure 114. This can produce a certain lack of western spatial clarity but it fits with the Japanese notion of inhabiting (Tanizaki, 1977). This spatial ambiguity is reinforced by the use of an essential wooden furniture. Therefore, the privacy gradient (McGlynn et al, 1985) does not have a specific sequence except for the shared entrance. In fact, visitors/residents/caregivers are suddenly in the central area. It acts as a connective and filtering spatial element to the more private spaces: the single bedrooms. The extensive use of the Japanese cedar in both blocks as a floor and wall finishing, as well as handrails, sliding doors strengthen the relationship with the site and the natural environment - Figure 115. In fact, this material is abundant in the region. On the one side, it contributes to the creation of a cosy, domestic environment. On the other side, it reduces the impact of falls (Professional Caregiver Interview, 2017, b). The same material is also used on the exterior façade as shingle - Figure 116. Even if the door use is minimal, wooden sliding rooms are mostly adopted in private spaces such as bedrooms and bathrooms but with a peculiarity: the "soft lock." It is a device through which the door can be easily unlocked from both sides (Designer Interview, 2017, b) - Figure 117.

Built after the kindergarten, the assisted living area (ZATSUBOKURINKAN) is a facility
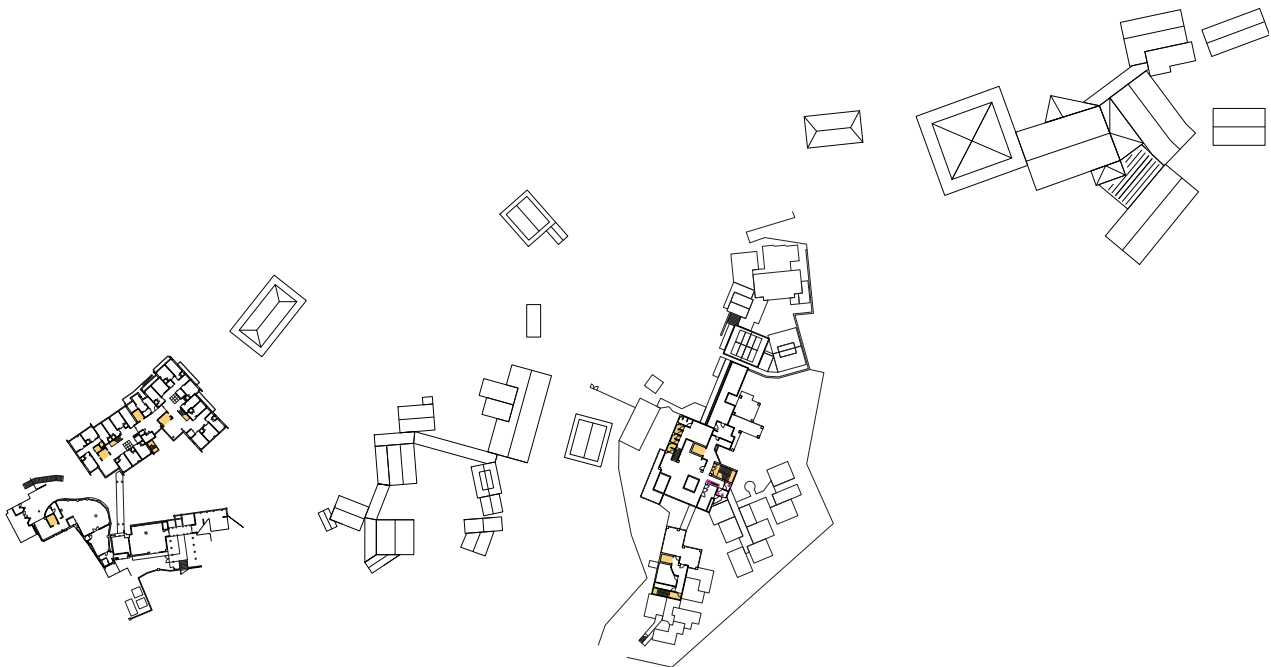
Figure 112. The Gojikara Mura's Hard Areas - Ground Floor © Davide Landi

Figure 113. The Gojikara Mura's Hard Areas - First Floor © Davide Landi

Figure 114. View of the Gojikara Mura Nursing Home's Rooftop Vegetable Garden © Davide Landi

Figure 115. View of a Gojikara Mura Nursing Home's Communal Area which Shows the Notion of Imperfection (i.e. "Gocha-Gocha") © Davide Landi

Figure 116. View of the Gojikara Mura Nursing Home's Façade System © Davide Landi

Figure 117. View of the Gojikara Mura Nursing Home's "Soft Lock" © Davide Landi

composed of several four-storey volumes connected each other through enclosed/ open and elevated passageways - Figure 118. This allows the facility to follow the particular topology of the site, while, the architect wanted to reduce as much as possible the impact on the existing natural environment. One participant commented: "The different volumes fit in the land, in between the trees; it looks like a labyrinth" (Resident Interviews, 2017, b). The volumes, different from one to the other, present an external rough concrete finishing coherent with the notion of imperfection ("Gocha-Gocha" in Japanese). Undoubtedly, the notion of imperfection benefits its occupants because an imperfect facility asks for an active contribution by its residents such as older adults residents engaged with DIY. A perfectly designed facility, instead, would limit older adults' experience. In fact, inhabitants may be overwhelmed by negative thoughts (i.e. it is too clean; I cannot repair it; it is too perfect, etc.). They would feel as guests not as active members of a community (Resident Interview, 2017, b).

Each volume accommodates around four or five single or double bedroom per floor - Figure 119. They slightly change in shape and size from one to the other due to different geometries of the volumes. The rooms have an ensuite toilet, a small stovetop, sink, and shower with an average size of 15 Sqm (Professional Caregiver Interview, 2017, b) - Figure 120, Figure 121, Figure 122. Commenting on this the architect said "It is tedious to make them look all the same" (Designer Interviews, 2017, b). Furthermore, the rooms have a minimalistic character. The rooms are clustered around central communal spaces - Figure 123. Here, the "hard areas" such as laundry, kitchen, tatami are clustered in one of the corners of the communal areas (McGlynn et al, 1985). These communal spaces are connected with the above mentioned open/enclosed passageways. Through them, it is also possible to access to four staircases and two elevators so that the population's accessibility is facilitated and safety guaranteed - Figure 124. They are 1.6 meters wide. The passageways are not just a physical expression of the horizontal distribution connecting the indoor

Figure 118. View of the Gojikara Mura Assisted Living's Floating Passageways © Davide Landi
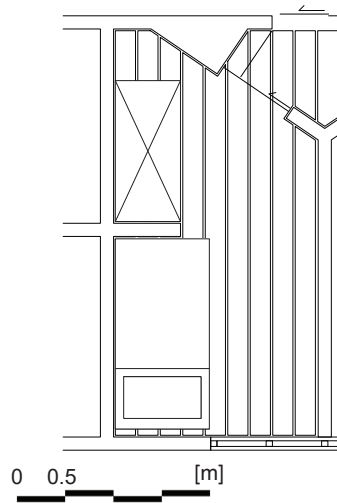
Figure 119. Standard 1-Room Apartment Floor Plan © Davide Landi

0   0.5   [m]

Figure 120. View of the Gojikara Mura Assisted Living's a Standard 1-Room Apartment © Davide Landi

Figure 121. View of an Ensuite Bathroom in a Gojikara Mura AssistedLiving'sStandard1-RoomApartment©DavideLandi

Figure 122. View of a Stove-Top and Shower in a Gojikara Mura Assisted Living's Standard 1-Room Apartment © Davide Landi

Figure 123. View of a Gojikara Mura Assisted Living's Communal Area © Davide Landi

Figure 124. View of the Gojikara Mura Assisted Living's Floating Passageways © Davide Landi

communal areas, outdoor terraces, and the vertical circulation's hard areas (McGlynn et al, 1985). Instead, they become a meeting place. They are a place in which to stop. In fact, they are furnished with wooden chairs, benches, bookshelves - Figure 125.

On each floor, the complex volumetric articulation defines a sequence of public/ communal spaces, indoor or outdoor (terraces) with different geometries. This encourages again residents and visitors to "look beyond" and to interplay. On the one hand, Japanese cedar is one of the most common woods in Japan so very affordable. Consequently, it is abundantly used as interior finishing material (i.e. flooring, ceiling, walls, handrails, etc.). On the other, this type of wood easily deteriorates and thereby residents can take care of it. Talking about this issue an interviewee said: "It continuously changes as a forest."

As in the other facilities, there is a Japanese Public Bath. It is a central social element in Japanese lifestyle and culture, especially for older adults. It is open from 9 am to 3 pm - Figure 126. The privacy gradient presents similarities to the privacy gradient of the nursing home. The main entrance is at the basement level. There is no a reception, although there is a café with chairs and big table where visitors, residents, volunteers can stop and talk and manage staff work - Figure 127. Consequently, different groups of people can freely enter or leave the facility. At this same level, there is another important communal space open to the public: "the dining house." It is a particular Japanese restaurant owned by a popular chef from Nagakute city - Figure 128. Here, students and teachers from the vocational school called "Mori No Gakuen," and kindergarten come to have lunch together with older adult residents, relatives and visitors (Professional Caregiver Interview, 2017, b). From the lower ground floor, users can access one of the elevators or one of the staircases. These take visitors and residents to the upper floors in which the enclosed passageways connect and buffer the communal spaces surrounded by the private rooms - Figure 129.

359

Figure 125. View of the Gojikara Mura Assisted Living's Floating Passageways © Davide Landi

Figure 126. View of the Gojikara Mura Assisted Living's Japanese Traditional Bath © Davide Landi

Figure 127. View of the Gojikara Mura Assisted Living's Main Entrance which Combines Staff Workstations and "Entrance Café" © Davide Landi

Figure 128. View of the Gojikara Mura Assisted Living's Dining Room/Restaurant which is Open to the Public © Davide Landi

Figure 129. View of a Gojikara Mura Assisted Living's Internal Staircase © Davide Landi

The other facilities such as the community centre (KOMINKA HOTOGI NO IE) - Figure 130, the art and craft shop (KOMINKA ZAWAZAWA) - Figure 131, the kindergarten (MORI NO YOCHIEN) - Figure 132, the café/restaurant (NODOKA) - Figure 133, the secondary/vocational school and nursing school (MORI NO GAKUEN) - Figure 134, show many elements that are peculiar of the Japanese architectural tradition. All of them are single or groups of one-story wooden pavilions. The big Japanese roofs define their architectural entity by casting a shadow on the ground; space is therefore defined. These "parasols" (Tanizaki, 1977) are sustained by slender wooden pillars and beams. The wooden structures describe and give a rhythm to a continuous and uniform interior space. They are characterised by a lack of spatial clarity. Additionally, they add a layer of historical nostalgia to the Gojikara Mura which act as positive effects on older adult residents (Professional Caregiver Interview, 2017, b). They emphasise also the sensorial experience. In fact, the smell, the sight, the touch is highly stimulated. For example, the community centre was an existing building which was moved to the Gojikara Mura from another part of Nagakute city. This operation was more expensive than building a new one from scratch. However, it was coherent with notions such as imperfection ("GOCHA-GOCHA") that underpinned the making of the Gojikara Mura. Nevertheless, the community centre is a public building, open to all the people of the surrounding community. Visitors can access it from all the four sides of the rectangular plan.

This spatial openness/continuity is emphasized in the interior. Occupants can freely move, sit on the wooden floor/tatami detached from the ground, talk, and so experience many kind of activities without too many constraints. Consequently, there is not a linear privacy gradient. The "hard areas" (McGlynn, et al., 1985) that are identified as the traditional Japanese kitchen ("KAMA"), the traditional Japanese bath, and toilet are clustered on the east part of the building. There is no gas, or electricity. All of these tools are heated up with firewood - Figure 135. The "popular" café and the art and craft

Figure 130. The Gojikara Mura's Community Centre © Davide Landi
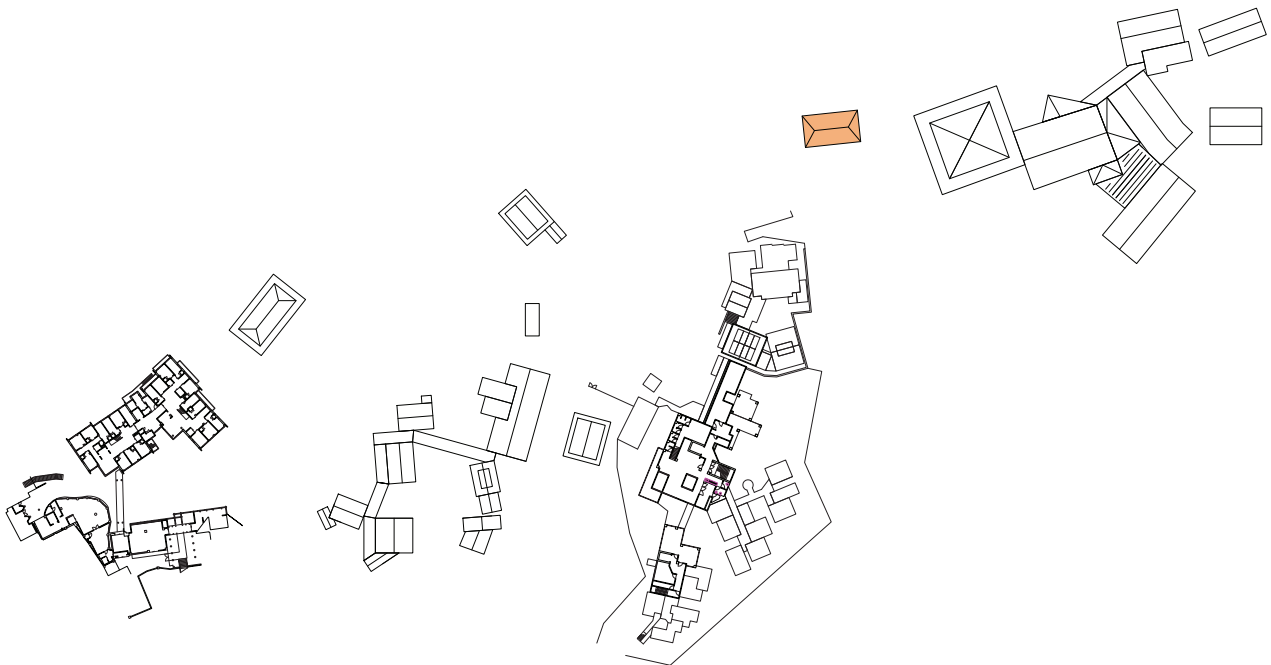
Figure 131. The Gojikara Mura's Art and Craft Shop © Davide Landi
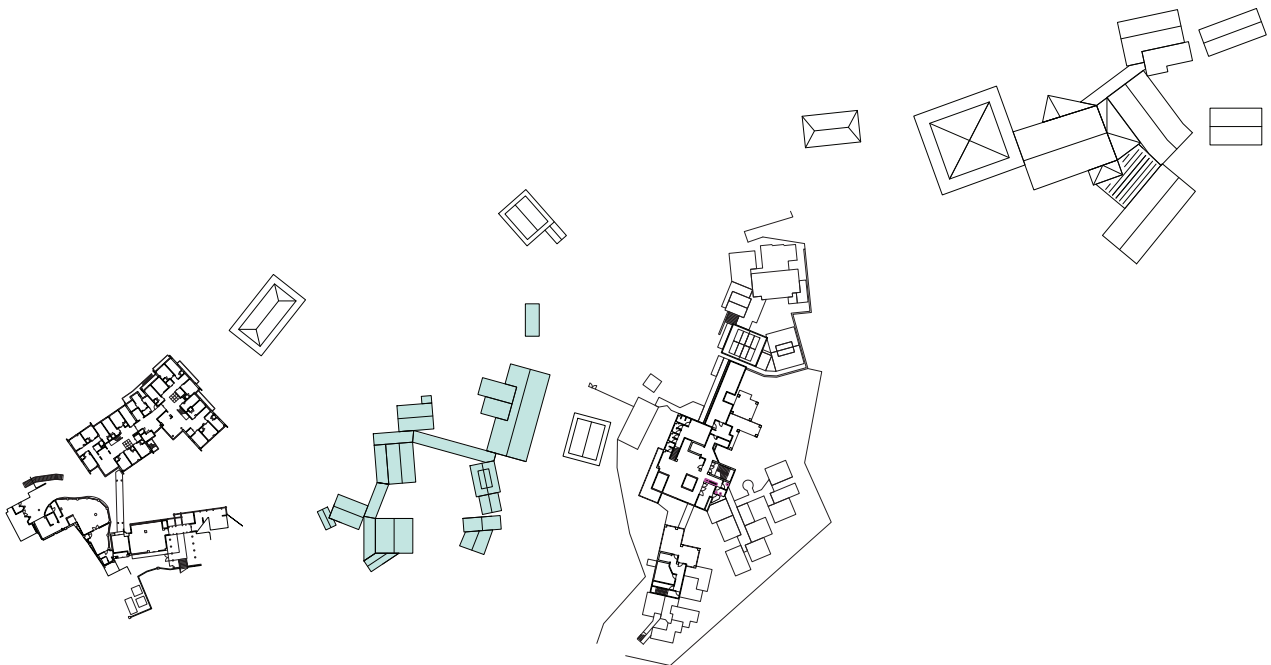
Figure 132. The Gojikara Mura's Kindergarten © Davide Landi
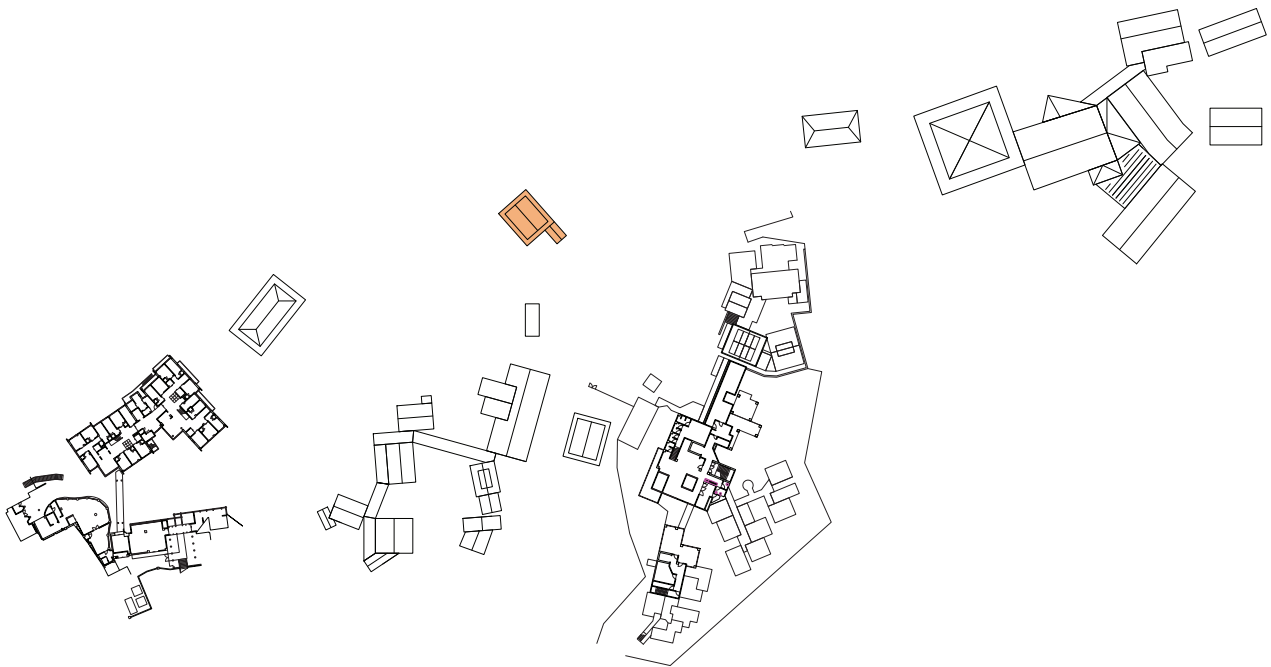
Figure 133. The Gojikara Mura's Organic Restaurant © Davide Landi

Figure 134. The Gojikara Mura's Nursing School and Secondary School/Vocational School © Davide Landi

Figure 135. View of the Gojikara Mura's Community Centre © Davide Landi

shop have analogous architectural features that are based on the same architectural concepts but on a smaller scale (Professional Caregiver Interview, 2017, b).

If the café, the art and craft, the community centre are individual pavilions; the educational facilities such as the kindergarten, the vocational school and nursing school (these last two are grouped together) are clusters of several one-storey wooden pavilions. Different in size, their articulation and layouts are driven by the particularity of the site. It is a steep slope, which, for some residents limits the experience of the natural environment (Resident Interview, 2017, b) and has a strong presence of trees. The different pavilions host different activities - Figure 136. Most of them are classrooms; one is a ceremony pavilion used in case of official events; and one a library - Figure 137. Additionally, toilets for the students are gathered together just in one pavilion, as well as the shoe shelves and changing rooms for teacher and students ("Hard Areas;" McGlynn, et al., 1985) - Figure 138. They are connected with covered wooden pathways generating a very complex pattern of passages. These pathways change in size (from 0.6 m wide pathways to platforms able to host outdoor events or classes) and types in fact, some are wooden staircases - Figure 139. They optimise the possibility of encounters and interaction - Figure 140. Consequently, users experience a spatial gradient, which emphasizes the presence of the natural environment. Children, teachers, visitors move from an indoor space (i.e. a classroom) to the natural environment through different types of "in-between" spaces (Radovic and Boontharm, 2012). In fact, the kindergarten fosters the sensorial experience of nature - Figure 141. For example, one interviewee said: "Nothing is taught here… listening, seeing, smelling, so feeling the nature is the best education for them" (Resident Interviews, 2017, b). Consequently, defining a specific privacy gradient is difficult. On the one side, according to the kindergarten design, visitors, teachers and children could access through the main gate. It was introduced for security reasons, although some residents argued that this may be a constraint to intergenerational encounters (Resident Interview, 2017, b). Immediately
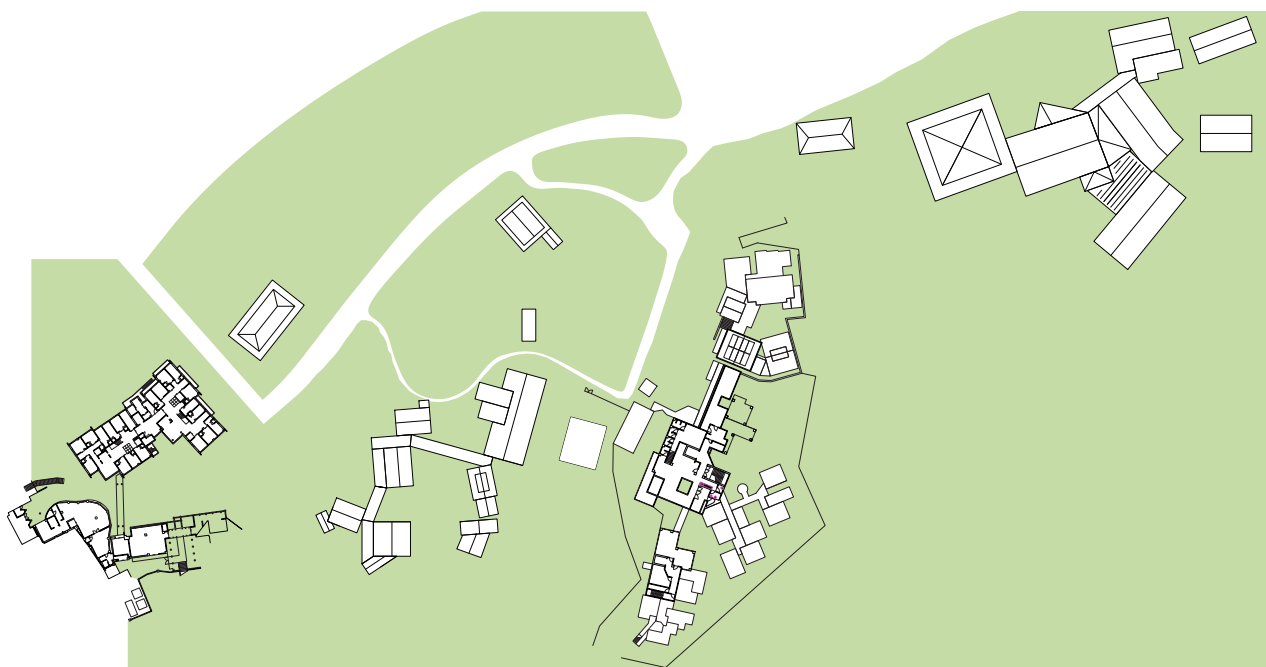
Figure 136. The Gojikara Mura's Green Areas © Davide Landi

Figure 137. View of the Gojikara Mura's Kindergarten and Central Playground © Davide Landi

Figure 138. View of one of the Gojikara Mura's Kindergarten Pavilion © Davide Landi

Figure 139. View of one of the Gojikara Mura's Kindergarten Passageways © Davide Landi

Figure 140. View of one of the Gojikara Mura's Kindergarten Passageways © Davide Landi

Figure 141. View of one of the Gojikara Mura's Kindergarten Passageways © Davide Landi

after, there is a green outdoor playground with a water fountain. The rest of the wooden pavilions are nestled on the slope and can be experienced and entered in multiple ways. Therefore, each occupant experiences the kindergarten and the surrounding natural environment in alternate ways. The vocational school/nursing school (in recent years the number of students decreased) has again a privacy gradient difficult to determine - Figure 142. The multiple wooden pathways allow students, teachers and visitors to experience the schools through different and personal journeys (Resident Interviews, 2017, b) - Figure 143 but always maximising the possibility of intergenerational encounters - Figure 144.

Due to the particular site and age groups of users, the architect had to design the different buildings respectively according to the "Building Standards law" issued by the Ministry of Land Infrastructure and Transport; and the "Elderly Welfare law" issued by the Ministry of Labor and Health (Designer Interviews, 2017, b). The village adopts a heating system fed by geothermal sources, then the natural ventilation provides a constant but modest temperature. Consequently, it warms up the feet and keeps the head cool according to more traditional health principles (Welzel – Connolly, 2014; Anderzhon et al., 2012). Additional resources for the production of environmentally sustainable energy are solar panels, and energy saving lighting fixtures. Also, rainwater is collected for a gardening purpose (Anderzhon et al., 2012).

The eclectic scenario in terms of provided services and architectural correlates is bound together by the powerful presence of the forest. The natural environment acts as both connecting tissues and a buffering component that fragments the perception of the more institutional facilities. The village "streetscapes" have the appearance of a conventional Japanese neighbourhood, a "normal community" (Anderzhon et al., 2012). It provides, therefore, a different type of outdoor continuous spaces: spaces for confrontation among the different group of people inhabiting the village (i.e. human

Figure 142. View of the Gojikara Mura's Nursing School and Secondary School/Vocational School © Davide Landi

Figure 143. View of one of the Gojikara Mura's Secondary School/Vocational School Classrooms © Davide Landi

Figure 144. View of one of the Gojikara Mura's Nursing School Passageways © Davide Landi

beings and animals) as well as spaces for privacy (Resident Interviews, 2017, b). In these terms, the natural environment has an active role/contribution in the care model adopted at the "Gojikara Mura." It is the "power of place" (Manager Interview, 2017, b). Furthermore, the robust natural environment helps the residents in the perception of the passage of time (Resident Interviews, 2017, b; Welzel – Connolly, 2014). It is an integral part of the village. Wayfinders are also used outdoors. Different statues of animals or idols (i.e. KURODANUKI, ENKIRI JIZO) label the different zones of the village (Professional Caregiver Interview, 2017, b) - Figure 145. This strong relationship with nature is preserved also in the interior spaces. A high number of windows/ openings looking outside maintain the visual connection with the surrounding forest. The opening in all the described buildings is the result of a careful proportional and dimensional study between the transparent (the glass) and opaque surfaces (the floor and the ceiling). This is a peculiar characteristic of Japanese traditional architecture. Therefore, residents whose more severe mental and physical condition are not able to participate are kept involved by the sights, smells and sounds (i.e. seeing the children or another visitor, listening to them, etc.) (Professional Caregiver Interview, 2017, b; Welzel – Connolly, 2014; Anderzhon et al., 2012).

Defining all the type of openings is difficult; the following described the most recurring. In detail, the nursing home has approximately 2 x 2 m (detached 0.3 m from the floor), or floor to ceiling windows in all the shared spaces. Their interaxis distance is around 3 m. The double height multipurpose room has the second line of smaller windows on top of the one described. Private rooms and service spaces have a number of windows approximately 1.5 x 1 m according to their areas. The assisted living facility has approximately 1.5 x 2.5 m (detached 0.8 m from the floor) windows or floor to ceiling windows in all the shared spaces. Their interaxis distance is around 3.1 m - Figure 146. The private rooms have a door window that allows residents access to a terrace, together with a combination of approximately 1 x 2 m or 1 x 1 m windows - Figure 147.

Figure 145. View of one of the Gojikara Mura's Wayfinders © Davide Landi

Figure 146. View of a "Gata-Gata" Corridor with Big Transparent Openings © Davide Landi

Figure 147. View of one of the Gojikara Mura Nursing Home's Small Communal Areas along the "Gata-Gata" Corridor which Shows the Relationship with the Outdoor Landscape © Davide Landi

Residents constantly sense the presence of nature, which is also emphasised by the terraces both in private and public settings.

In both facilities the corridors, before any direction change, always end with an opening, a window. This positively affects any possible claustrophobic perception of this longitudinal space. Inhabitants always have an outside glimpse (Resident Interview, 2017, b).

The café, the community centre, the art and craft shop, the kindergarten and the vocational/nursing school, as with most of the Japanese traditional architecture, have a mostly transparent perimetral vertical surface. This augments the outdoor physical and the sensorial perception through the presence of the big wooden roof.

Another common characteristic of all the facilities is the dimensional and proportional study on the interior. In fact, the architect wanted to create an environment suitable for the physical characteristics and abilities of older residents. For example, the handrails, the windows and the ceiling are lower. Therefore, bedridden residents preserve a visual connection with the outside through the windows; or the lower ceilings create a darker space such as in traditional architecture counterbalanced by an abundant natural light coming from multiple directions; and humpback people can grab a handrail while walking - Figure 148.

Living

The Gojikara Mura proposes a mixed population which indicatively present the following constitution. The Nursing Home accommodates 48 people for a long stay, reaching 80 people for short stay (Professional Caregiver Interview, 2017, b; Anderzhon et al., 2012). There, it is also possible to find the children's day-care centre. The average
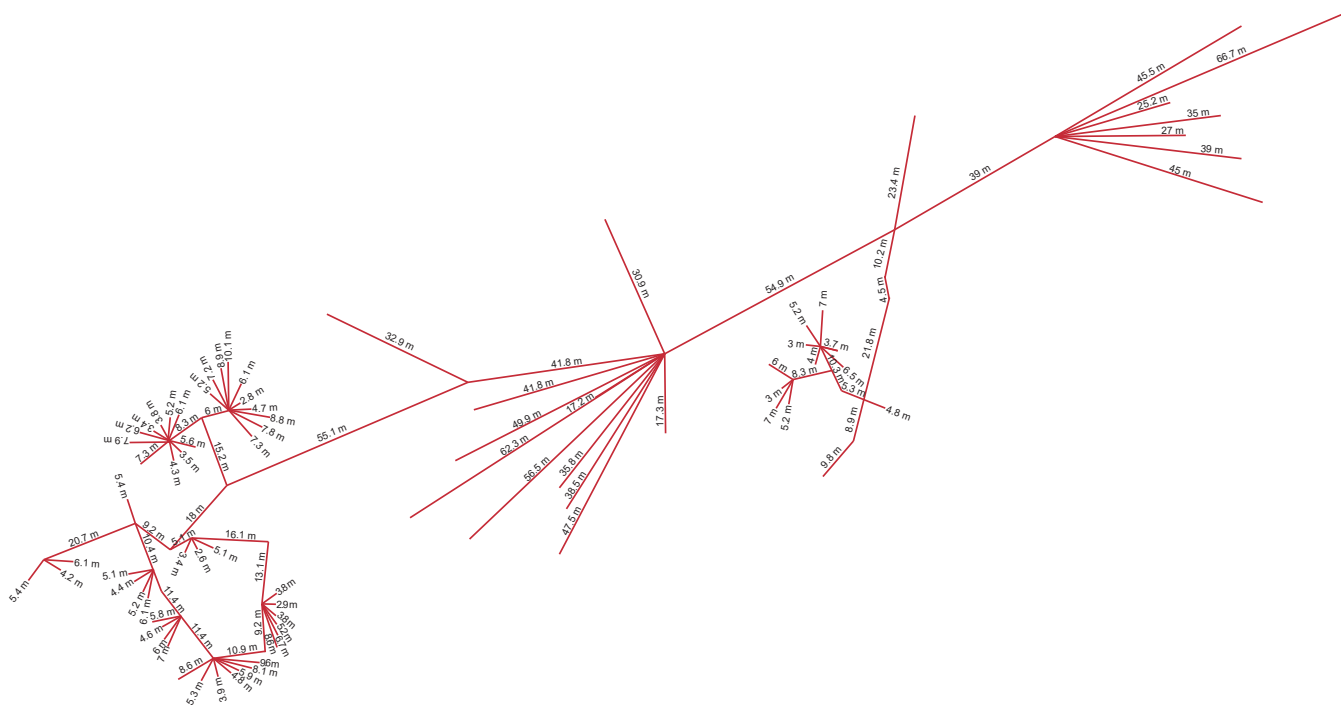
Figure 148. The Gojikara Mura's Architectural Distances. Quantification of the Distances Between the Private Apartments and the Communal Areas © Davide Landi

daily number of children between three and five years old is 15. The assisted living housing complex also accommodates 50 older adult residents (Professional Caregiver Interview, 2017, b). The Kindergarten has a population of 200 children between three and five years old. The classes are mixed, and thereby children of different age share the same class. The number of students at the vocational school and nursing school changes every year, although the number of enrolled students is around 300. Students have respectively an average age 6 to 12 years old, and 18 to 22 years old. The different facilities are at a very short walkable distance from each other. This proximity allows residents to access different care services in case of necessity, or a changed health condition (Professional Caregiver Interview, 2017, b). The total number of registered volunteers is 200, and the number of professional caregivers is 220. All of the residents, students, and children are Japanese nationals. Focusing on the older population, the residents come from different parts of the country such as Aichi Prefecture, Mie Prefecture, Gifu Prefecture, Hokkaido Prefecture, Chiba Prefecture, Shiga Prefecture and Osaka Prefecture. In detail, 76 are females and 24 males. The average age for females is 79.5 years old and 82 years old for males. (Professional Caregiver Interview, 2017, b). The total population presents cases of different stages of dementia and/or serious physical conditions. Due to the popularity of the care model, the decision of moving into the facility for most of the residents was taken independently (Resident Interviews, 2017, b). There, older residents can preserve their lifestyles and social relationships as long as possible. The diversity of the population is apparent also in terms of animals (i.e. there is a goat and a dog), members of the local community who go there volunteering, or using the roof garden for growing vegetables with children of the kindergarten. These are kept for themselves or donated to the village. Additionally, local artists are able to exhibit their works in the village and sell them at the art and craft shop. As well, the restaurant is a meeting place for residents, students, teachers and community members (Resident Interviews, 2017, b; Welzel – Connolly, 2014). This produces a space of enjoyment (Lefebvre, 2014) that makes people happy and

"hearts move/beat" (Resident Interviews, 2017, b).

Consequently, the "Gojikara Mura" fosters a care model based on the maximisation of encounters between older adult residents, students, children and their families, visitors, professional caregivers and volunteers. As one interviewee said: it was enjoyable to be "Listening to the children and to see their faces every day" (Resident Interview, 2017, b). This particular care model produces a kind of genuine, respectful care and interdependence between the different occupants. In fact, they are encouraged to build meaningful relationships, instead of only accomplishing tasks. It definitely implies some lifestyle changes for residents, although it has positive effects on their wellbeing and independence (Resident Interview, 2017, b). This is the simple consequence of opening the various facilities up to the community as the whole. The community centre, for instance, can host different types of events such as seminars, children's education programmes, or weddings in which the different group of people do activities together (i.e. cooking). This forces a mixture of users (Professional Caregiver Interview, 2017, b; Anderzhon et al., 2012) - Figure 149.

Furthermore, the Gojikara Mura adopted a series of cultural and ethical notions (i.e. the fundamental role of nature) that have shaped the architectural/urban frame and the paradigm of care (Designer Interview, 2017, b; Anderzhon et al., 2012) since its inception. For example, the notion of "imperfection" is found in the architectural frame as well as in the care model and thereby inhabitants' lifestyles. Commenting on this, one of the interviewees said: "Mess is something comfortable. Perfection stops participation." On the one hand, visitors run into untidy common space or rooms very often. On the other hand, visitors see older adults sitting next to children or students, watching them, talking at them, and playing with them (Professional Caregiver Interview, 2017, b). Nevertheless, interviews with residents (2017, b) suggest that also activities with Nagakute citizens should be increased. Additionally, strategic is the position of the
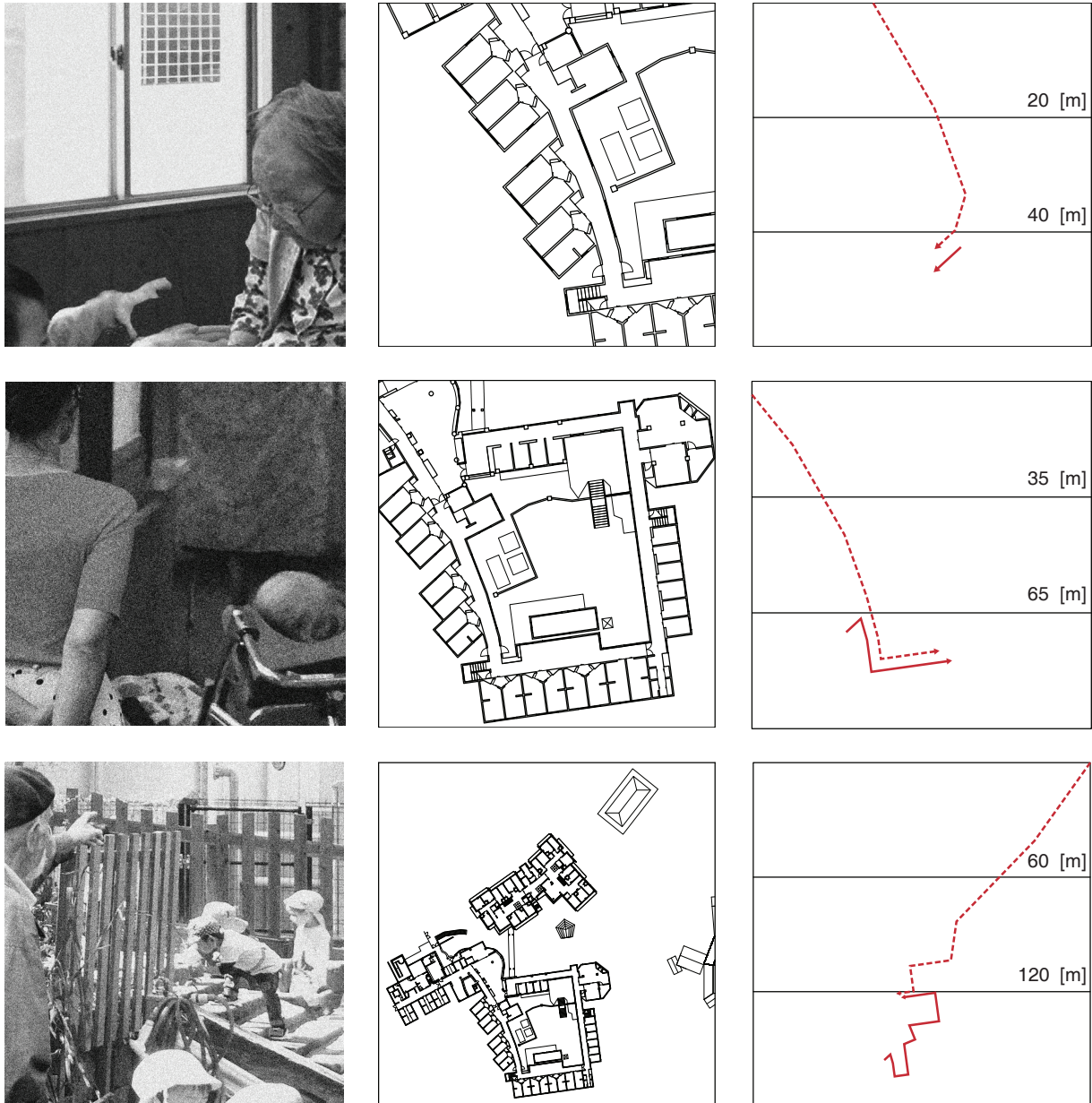
Figure 149.TheGojikara Mura's Movements through Spaces. It Illustrates the Movements Towards Spaces of Encounters between Different Age Groups. The Dashed Line Represents Young-Adults' Movements, while the Continuous Line Represents Older-Adults' Movements © Davide Landi

village. It is a walkable or very short driving distance from relevant places for the residents such as a shopping area, or a language school. In fact, the life of most of the residents is not circumscribed within the village edges (Resident Interview, 2017, b).

As previously described, the care model revolves around many contributors, who have positive effects on residents' wellbeing (Professional Caregiver Interview, 2017, b). However, central is the contribution of professional caregivers. It is difficult to establish the number of hours of direct care provided to residents (Anderzhon et al., 2012). Furthermore, interviews (Professional Caregiver Interview, 2017, b) revealed that working here may be very tiring, from a maintenance, and management point of view due to some aspects characterising the built environment, but fundamental for professional caregivers is to have a sense of "satisfying tiredness." This confirms the peculiar inconveniences of traditional Japanese lifestyles (Professional Caregiver Interview, 2017, b). Consequently, volunteers have a strategic role. They usually wear a yellow t-shirt to differentiate them from professional caregivers who do not have a dress code to follow. Additionally, the older adults living in the assisted living complex are engaged in several activities and thereby the sense of belonging to the community is strengthened as confirmed by the interviews (Resident Interview, 2017, b). For instance, they do patrol activities or help the staff at the restaurant (Resident Interview, 2017, b). Sexuality is also important for residents, at least the reminiscence of it. In fact, a shrine (Japenese temple) in the centre of the Nursing Home's double height multipurpose room contains a wooden phallus symbolising the fertility and virility. This may prompt flirting between the residents or just make them laugh so that their "hearts (are) beating" (Professional Caregiver Interview, 2017, b; Welzel – Connolly, 2014). The facility provides internet access that can be used by residents and visitors' computers or smartphones and thereby social networks. Only a small number of respondents, however, indicated that they own smartphones or computers and thereby are able to use them (Resident Interview, 2017, b). This confirms an

awareness towards nowadays' relevant role of technology and information beyond more traditional media such as television, magazines and local newspapers (Resident Interview, 2017, b).

The residents are tenants of the Gojikara Mura. Most of the care expenses (90% - 80% according to their incomes) are subsidised by the Long-Term Insurance Scheme (LTCI); the rest are directly paid by service users in areas such as meals (10%) (Manager Interview, 2017, b; Anderzhon et al., 2012).

The three analytical segments helped to empirically define the overall object of study, the Gojikara Mura©. They were capable of bringing light to the aspects which are central in this investigation such as care provision, physical settings, and interactions among different social, and age groups of occupants. Consequently, the Thinking explored the founder member's vision and the architect's process of translating it through architectural principles. The Making revealed the physical and spatial consistency of the founder member's vision and its development over time. The Living, instead, illustrated the relational patterns between different social, and age groups of occupants. Taken together, these three sections suggest that there is an association between care provision models, lived experiences and the architectural frame of three case studies. Nevertheless, this needs to be combined with theory to give more consistency to the discourse on architectural types. The next chapter, therefore, attempts to critically discuss and thereby theorise this association - Figure 150.

Figure 150. The Gojikara Mura's Axonometric View © Davide Landi

388

REFERENCE LIST

Aftab, A. (2015) Students Move in with Residents in Dutch Nursing Home and Help Combat Social Isolation and Depression Among Elderly. *The Independent* [online], 20th July 2015. Available at: https://www.independent.co.uk/student/news/students-move-in-with-residents-in-dutch-nursing-home-and-help-combat-social-isolation-and-10401882.html. [Accessed: 20th April 2017].

Agi (2017) Mettereste il Nonno a Vivere con un Senzatetto? A Helsinki lo Fanno [online]. Available at: https://www.agi.it/estero/helsinki_giovani_senzatetto_case_di_riposo_anziani_affitto-1901231/news/2017-06-26/. [Accessed: 12th April 2018].

Al Jazeera News (2015) *Dutch Care-home Doubles as Student Residence* [online video] Available at: https://www.youtube.com/watch?v=THSbuHUZGxY [Accessed: 24th April 2017].

Anderzhon, J. W., Hughes, D., Judd, S., Kiyota, E., Wijnties, M. (2012) *Design for Aging: International Case Studies of Building and Program.* New Jersey (NJ): John Wiley and Sons.

BBC (2015) *Students in a Retirement-home in The Netherlands - Report by Anna Holligan (BBC)* [online video] Available at: https://www.youtube.com/watch?v=tjRtaulQsZU [Accessed: 24th April 2017].

CityLab (2015) *This Helsinki Suburb Is Offering Millennials Cheap Rent to Live in a Senior Centre* [online]. Available at: https://www.citylab.com/equity/2015/12/helsinki-laajasalo-millennials-senior-home-studio-rent/418134/ [Accessed: 12 April 2018].

CNN (2016) *Young People Given Cheap Rents in Finnish Seniors Home* [online] Available at: https://edition.cnn.com/2016/01/21/europe/helsinki-seniors-home-o-man-muotoinen-koti/index.html. [Accessed: 12 April 2018].

Cullen, G. (1971) *The Concise Townscape.* New York (NY): Architectural Press.

Curtis, W.J. (2009) *Modern Architecture Since 1900.* London: Phaidon.

Del Re, P. (2017) Nella Casa di Riposo che Cura gli Anziani Ospitando i Ragazzi. *La Repubblica,* 11th January 2017, p.17.

Department of Housing and Building (2005) *Decree on Accessible Buildings.* Helsinki: Ministry of the Environment.

Design Stories from Helsinki (2015) *Tackling Youth Homelessness with Design Experiments: A Home That Fits* [online] Available at: https://www.muotoilutarinat.fi/en/project/a-home-that-fits/. [Accessed: 12 April 2018].

Designer (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Designer (2017, b) *Interview* with Davide Landi. Nagakute (Japan). 29th September 2017.

Designer (2018) *Interview* with Davide Landi. Helsinki (Finland), 23rd June 2018.

Deventer (2017) *Deventer* [online]. Available at: https://www.deventer.nl/english [Accessed:12th May 2017].

Dobbins, M., Alto, A., Blomstedt, A., Siren, K., Siren, H., Ruusuvuori, A. and Pietila, R. (1963) The Achievement of Finnish Architecture: Social Responsibility and Architectural Integrity. *Perspecta* [online] 8, pp. 3-36. DOI: 10.2307/1566898 [Accessed: 2nd October 2018].

Elliot, A.; Masataka, K. and Sawai, A. (eds.) (2013) *Japanese Social Theory. From Individualization to Globalization.* London: Routledge.

European Union (ed.) (2015, a) *The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies.* Brussels: European Commission.

Fukutake, T.(1989) *Japanese Social Structure: Its Evolution in the Modern Century.* Tokyo: University of Tokyo Press.

GSD Harvard (2016) *Richard Sennett: Interiors and Interiority* [online video] Available at: https://youtu.be/hVPjQhfJfKo [Accessed: 11th May 2017]

Hall. E.T. (1969) *The Hidden Dimension.* New York (NY): Anchor Books Edition.

Hisano, S., Motoki A., and McGreevy, S. R. (2018) Revitalising Rurality under the Neoliberal Transformation of Agriculture: Experiences of Re-Agrarianisation in Japan. *Journal of Rural Studies* [online] 61,pp. 290-301. DOI: https://doi.org/10.1016/j.jrurstud.2018.01.013.

Hoglund, J.D. and Ledewitz, S.D. (1999) Designing to Meet the People with Alzheimer's Disease. In: Schwartz, B. and Brent R. (eds.) *Ageing, Autonomy, and Architecture: Advances in Assisted Living*. Baltimore (MD): Johns Hopkins University Press, pp. 229-261.

Ito, K. (2004) Gojikara Village, the Power and Potential of "Zatsu." *Axis* 6, pp.137-140.

Jacobs, J. (1961) *The Death and the Life of the Great American Cities.* New York (NY): Random House.

James, I. A., WoodMitchell, A., Waterworth, A.M., MacKenzie, L.E. and Cunningham, J. (2006) Lying to People with Dementia: Developing Ethical Guidelines for Care Settings. *International Journal of Geriatric Psychiatry* [online] 21, pp. 800-801. DOI: 10.1002/gps.1551 [Accessed: 2nd May 2018].

Japan Travel (2017) *Nagakute* [online]. 13th of November 2017, Available at: https://www.jnto.go.jp/eng/spot/histtown/historicbattlefieldofnagakute.html [Accessed: 9th of December 2017].

Journeyman Pictures (2017) *Drinking Games and Jigsaws: A Unique Dutch Retirement Home* [online video] Available at: https://www.youtube.com/watch?v=_KWwso1CQPw [Accessed: 24th April 2017].

Kishii, T. (2015) Tokyo 150 Projects. Urban Diversity Management. *Shinkenchiku –* Special Issue 06, June 2015. Tokyo: Shinkenchiku-sha Co. Ltd.

Landi, D. (2017) Towards New Architectural and Urban Typologies: Thinking, Making and Living as a Post Occupancy Evaluation Method. *Conscious Cities Journal* [online] 3. Available at: http://www.ccities.org/towards-new-architectural-urban-typologies-thinking-making-living-post-occupancy-evaluation-method/. [Accessed: 27th January 2018].

Lefebvre, H. (2014) *Toward An Architecture of Enjoyment.* Minneapolis (MN): University of Minnesota Press.

Manager (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Manager (2017, b) *Interview* with Davide Landi. Nagakute (Japan). 29th September 2017.

Manager (2018) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018

Mattie, E. and Derwig, J. (1995) *Functionalism in the Netherlands*. Amsterdam: Architectura & Natura Pers.

McElveen, T. (2015) *Lying to People with Dementia: Treacherous Act or Beneficial Therapy?* [online] Available at: https://www.rcpsych.ac.uk/workinpsychiatry/faculties/ oldagepsychiatry/newsletters/enewsletterseptember2015/lyingtopeoplewithdementia. aspx [Accessed: 2nd May 2018].

McGlynn, S., Smith, G., Alcock, A., Murrain, P., Bentley, I. (1985) *Responsive Environments, A Manual for Design.* Oxford: Elsevier Ltd.

Nakane, C. (1970) *Japanese Society.* Los Angeles (CA): University of California Press.

Ozaki, R. (2002) Housing as Reflection of Cultures. *The Housing Journal* [online] 17 pp. 209-227. DOI: 10.1080/02673030220123199 [Accessed: 27th September 2016].

Ozaki, R. (2001) Society and Housing form: Home-Centredness in England vs. Fa-

mily-Centredness in Japan. *The Journal of Historical Sociology* [online] 14 pp. 337-357. DOI: 10.1111/1467-6443.00149. [Accessed: 27th September 2016].

Professional Caregiver (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Professional Caregiver (2017, b) *Interview* with Davide Landi. Nagakute (Japan), 29th September 2017.

Professional Caregiver (2017) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018.

Radovic, D., and Boontharm, D. (eds.) (2012) *Small Tokyo.* Tokyo: Flick Studio.

Resident (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Resident (2017, b) *Interview* with Davide Landi. Nagakute (Japan). 29th September 2017.

Resident (2018) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018.

Rudolf Senior Home (2018) *WELCOME TO RUDOLF SENIORS HOME!* [Accessed: 12 April 2018].

Rossi, A. (1982) *The Architecture of the City.* Cambridge (MA): MIT Press.

Saarnio, R., Sarvimäki, A., Laukkala, H., Isola, A. (2012) Stress of Conscience Among

Staff Caring for Older Persons in Finland. *Nursing Ethics* [online] 19 (1), pp.104-115. DOI: https://doi.org/10.1177/0969733011410094 [Accessed: 12 April 2018].

Stories (2016) *Why These Millennials Live in a Retirement Home* [online video]. Available at: https://www.youtube.com/watch?v=Xiofjk9rYAM. Accessed: 12 April 2018].

Smith, G. (2014) *Mental Health Nursing at a Glance.* London: Wiley Blackwell.

Tanizaki, J. (1977) *In Praise of Shadow.* London: Vintage.

TEDex (2016) *Intergenerational Learning: Exchanges Between Young and Old-Jurriën Mentink.* Available at: https://www.youtube.com/watch?v=Pt58fu-TjWc [Accessed: 24th April 2017].

The Guardian (2017) Why Young People are Renting Rooms in a Helsinki Care Home [online]. Available at: https://www.theguardian.com/society/2017/jun/21/young-people-renting-rooms-helsinki-care-home [Accessed: 12 April 2018].

The Holding Project (2017) *A Home That Fits - Experimental Housing Approaches* [online] Available at: https://www.theholdingproject.co.uk/single-post/2017/06/15/A-Home-That-Fits---experimental-housing-approaches. [Accessed: 12 April 2018].

The Humanitas Deventer (2017) *The Humanitas Deventer* [online]. Available at: http://www.humanitasdeventer.nl/wonen [Accessed: 24th April 2017].

Turner, J. (2016) The Happiest Old People's Home of the World. *The Times,* 10th September 2016, pp.52-53.

Voordt, D.J.M. van der (1997) Housing and Care Variants for Older People with Dementia. Current Trends in the Netherlands. *American Journal of Alzheimer's Disease* 12 (2), [online] pp. 84-92. Available at: http://bk.home.tudelft.nl/fileadmin/Faculteit/BK/Over_de_faculteit/Afdelingen/Real_Estate_and_Housing/Organisatie/Medewerkers_RE_H/Personal_pages/VanderVoordt/General_list/doc/1997-Alzheimers Disease_housingcare.pdf [Accessed: 26th April 2016].

Welzel – Connolly, A. (2014) *A Practical Tool Kit for Carers*. London: Dementia Dialogue.

Whipple, T. (2017) Millions of Pound are Wasted in Poor Care. *The Times,* 6th February, p. 23.

WilliammumfordUTS (2016) *Dateline Shorts: My 93-year-old Flatmate* [online video] Available at: https://www.youtube.com/watch?v=V7TCatTjjjs [Accessed: 24/04/2017].

CHAPTER 4

Constructed Open Types: The Gojikara Mura© in Nagakute (JP), The Rudolf© in Helsinki (FI), And The Humanitas© in Deventer (NL). A Comparative Argument

This chapter aims to distil the commonalities and differences of the relationship between the care models, living experiences and the architectural frames of the three case studies. To do that, the overall structure of this chapter takes the form of four main sections. Section (1) includes *Theming 1: a New Paradigm of Care*, Section (2) includes *Theming 2: Redefining the Notion of Typology*. Section (3) *Open Types As Heterotopia*, and Section (4) *The Ethics of the Open Type*. They constitute the discussion surrounding the necessity of a renewed notion of architectural and care types. In this, the notion of 'open type' and its principles emerge from the nebulous spectrum of older adults' long-term care facilities.

An initial objective of the project, however, was to identify architectural correlates, which propose an alternative and inclusive spatial and thereby socio-economic organisation in a new social-demographic structure. This structure's emergence is influenced by the increasing societal presence of older adults with early stages of dementia. From this, the second question in this study sought to determine if these architectural correlates could suggest an alternate notion of architectural types – the open type. The results chapter of this study, therefore, empirically illustrated three different case studies. First, the Gojikara Mura is a diverse care village. In 1981, the Gojikara Mura's founding member opened a children's day-care centre. Six years later, the children's day-care centre was extended to include a nursing home for older adults with different level of physical, mental impairments (Anderzhon et al. 2012). Situated on the southeast edge of Ryokuchi Greens Prefectural Park (Natural Reserve) in Nagakute, Japan, Gojikara Mura is an aggregation of one- to four-storey buildings. The Gojikara Mura founding member decided to adopt a care model that revolves around many actors, such as the forest, the animals, mothers of children, nursing students, etc. It is a forward-lo-oking care model fostering diversity and interaction between different age categories – See Table 1, p. 396. This would create a strong sense of a community, a "MURA," which has a central role in residents' daily lives. According to the care principles

and a desire to protect the natural environment (a pre-existing forest) from urban development (Manager Interview 2017, b; Anderzhon et al. 2012), these initial facilities have been integrated with other older adults' care and community services, such as a kindergarten, an assisted living unit, a community centre, a secondary school, nursing school, café/restaurant, and art and craft shop/workshop (Anderzhon et al. 2012). The mixture of different services is so that different age categories would generate positive effects on children and older adults' lifestyles and wellbeing. This particular model produces a kind of genuine, respectful care and interdependence among the different subjects who are encouraged to build meaningful relationships instead of "doing tasks" (Manager Interview 2017, b).

Second, Rudolf is a senior home completed in 1974 and located in a suburban area of Laajasalo - Helsinki, Finland. It is a five-storey Finnish functionalist housing complex, which is divided into two blocks. Since February 2015, the Rudolf Senior Home embodied an innovative housing solution within A Home that Fits project (Manager Interview, 2018; Design Stories from Helsinki, 2015). This project aimed to tackle homelessness among Finnish young-adults through the provision of alternative housing solutions. In this, Rudolf's settings have been an architectural frame with positive effects on older adults and young adults' loneliness and stigma (The Holding Project, 2017; CityLab, 2015). The new housing solution, however, was underpinned by a care model, which embraced principles of togetherness, and community. Professional caregivers, therefore, enhance the quality of life through a people-centred care provision. Older adults residents are still able to maintain their privacy and the possibility of doing what they are still able to do (Rudolf Senior Home, 2018; Professional Caregiver, 2018) – See Table 1, p.396. Third, the Humanitas is a nursing home built in 1964 and situated on the northern outskirts of Deventer in the Netherlands. The five-storey building is a Dutch functionalist building. In 2012, the Dutch government cut down older adults' care funding while the building regulation for older adults' healthcare facilities was

revised. These had inevitable negative repercussions on the provided care model and its physical settings. The number of professional caregivers was significantly reduced, and the Humanitas building required a renovation. Consequently, the Humanitas CEO, in partnership with TIAS School of Business and Sociology, TU, Eindhoven decided to develop a new care model, like in Japan and Finland, focusing on the quality of life, well-being, and respect for users. It is a care model deeply rooted in the notion of socio-relational reciprocity and interdependence while promoting users' independence in what they are still able to do (WilliammumfordUTS 2016; Manager Interview 2017, a) – See Table 1, p. 396.

Table 1: Population Constitution

	Gojikara Mura© (person)	Humanitas© (person)	Rudolf© (person)
Older Adults	80 (Nursing Home - short and long stay); 50 (Assisted Living)	160	102 (52 East Block, and 50 West Block)
Professional Caregivers	220	220	91
Volunteers	200	200	20
Students	300 (Enrolled – Nursing and Vocational school)	6 (Residents - University)	4 (Residents – Young Adult); 18 (Residents – Young Adults with Mental Disabilities)
Children	200 (Kindergarten); 15 (Daycare Centre)	0	0
Total	1,050	566	235

Source: Data Adapted from Interview with Author 2017/ 2018

To ensure equality, the analysis was structured around three distinct yet connected themes: "Thinking, Making, and Living" (Landi, 2017).

The most obvious finding to emerge from the analysis acknowledges the geographical

and thereby anthropological repercussions on the notions of space, and inhabitation. Authors such as Hall (1959; 1966) and Tanizaki (1977) abundantly investigated this. On the one hand, in *The Hidden Dimension*, and *The Silent Language*, Hall untangled the idea of possession and territoriality in different countries. This directly affects the physical distances and thereby how people behave in a space (Hall, 1966; Hall 1959). On the other hand, Tanizaki (1977) described the elegant and minimalistic frigidity of Japanese architectural elements such as the Japanese roof in the book *In Praise of Shadow*. They translate the Japanese notion of inhabitation, which is mediated by a lack of spatial clarity. The use of simple curtains to divide the space or the use of bedrooms that changes over time confirm this. In the same vein, authors such as Eiler Rasmussen effectively described a Dutch use of private and public space, which is grounded in a strong sense of communal living. For example, volunteers' cooperation has been long promoted by limiting personal independence through following to self-made and unwritten laws. The Humantias© care model embodies this (1951, cited in Maki, 2008 p.52):

> A stone walled canal with building block above it, on each side covered with houses built closely together and separated from the canal by cobbled roadways. The narrow, gabled ends of the house face canal and behind the deep houses are gardens…finally just outside the houses is a special area called in Amsterdam the "stoep" which is partially a pavement and partly a sort of threshold of the house.

As mentioned in the methodology chapter, however, the international nature of this study does not attempt to provide an ethnographical understanding of the case studies. Inevitably, certain cultural and ethnographical notions required explanations.

Over time, research on older adults and dementia-friendly environments has focused

on guidelines for users' sensorial stimulation, independence, and mainly their safety. On the one hand, the *Design for the Mind Guidelines,* for instance, is the outcome of a recent piece of research from the Helen Hamlyn Centre for Design (2016). The guidelines translate the contribution of people who have experienced directly or indirectly neurodiversity. In 2018, the British Standards Institute (BSI) included them into the new BS 8300 code of practice. On the other hand, research has supported practitioners in the design field. The *Dementia Design Audit Tool,* published by the University of Stirling, is an exemplifying publication that provides tools for the assessment of older adult sand dementia-friendly environments (Dementia Services Development Centre, 2009). In particular, it attempts to assess architectural elements and spaces (i.e. lifts, corridors, wayfinding, entrances, lounge areas, dining rooms, treatments rooms, outside areas, hairdressing rooms and their meaningful occupation) that compensate sight, hearing, and the basic mental and physical impairment of ageing. For example, the Japanese, Finnish and Dutch case studies have indoor and outdoor wayfinding. They use clear signage in which writings have a colour in contrast with the colour of the background. Additionally, they use pictures or familiar objects (i.e. dolls, family pictures, etc.) which are placed to adjacent surfaces of doors or rooms that they refer to. Some of them fall in the theoretical frame of "therapeutic lies" (James et al., 2006; McElveen, 2015) such as the Japanese bath sign in Gojikara Mura© which also employs landmarks such as animals or idols statues outdoor. However, they lack consistency. The use of colours, however, counterbalances this lack of consistency (i.e. lifts of different colours in Gojikara Mura©). Together with the adoption of different materials, and furniture in the Humanitas©, or murals in the Rudolf©, these on each floor helps the navigation (Blackman et al. 2003; Best and Porteus 2012). Nevertheless, the *Dementia Design Audit Tool* (Dementia Services Development Centre, 2009) indicates colours mainly help staff and relatives, while landmarks and memorabilia help older adults' residents.

Furthermore, Rudolf© and Gojikara Mura© corridors have a consistency in the tone of

floorings, but Humanitas©' corridors, instead, change in tones. Additionally, Rudolf© and Humanitas©' corridors do use matte flooring surfaces, whereas the Gojikara Mura© corridors flooring, combined with the ample fenestrations, generates glare. However, all the three case studies have threshold strips along them (Dementia Services Development Centre, 2009). Corridors should also present a visual and physical continuity (Iwarsonn and Stahl 2003; Cronin- Golomb 2014; Healthcare Design and Management 2014). This together with handrails assists older adults' movement. Nevertheless, the geometrical complexity of Gojikara Mura©'s "Gata-Gata" corridor and handrails of the same colour of the background, and the Rudolf©'s physical limitations (i.e. 1.2 meter wide corridors and steep ramps) contradict what guidelines indicate. In addition to this, each case study has very long corridors. Inevitably, the profession of caregiving is negatively affected. Nurses regularly face ethical challenges and often deal with psychologically distressing situations (Saarnio et al., 2012; Teeri et al. 2006), having long corridors makes a working environment physically exhausting (Professional Caregiver Interview, 2017, b; Professional Caregiver Interview, 2017, a; Professional Caregiver Interview, 2018).

The natural light contributes to decreasing distress and distraction (Brawley 2001; Delhanty 2013; Day et al. 2000; Highnett et al. 2016; Barnes 2002). The ample openings of the Humanitas©, the Gojikara Mura©, and the Rudolf© match with the requirements of guidelines. They also emphasise the visual relationship with the surrounding nature. For example, the Gojikara Mura©'s architect designed lower windows to preserve a visual connection with the outside for bedridden residents. Whereas the Rudolf© and Humanitas© have a large number of windows which was inherited from the principles of modern architecture. In particular, the Humanitas© has a double height winter garden with skylights and thereby a zenithal natural light comes in. In this, the residents' perception of the passage of time is maximised. In case, no natural light is present, uniform and glare-free artificial light, when required, simulates the intensity and colour

of the sunlight (Professional Caregiver Interview, 2017, b; Professional Caregiver Interview, 2017, a; Professional Caregiver Interview, 2018; Dementia Services Development Centre, 2009). Unfortunately in Humanitas, Rudolf and Gojikara Mura using big multipurpose and dining rooms create noise and crowding. These spaces have recognisable design furniture and crockery, and there are more than the required seats, and thereby visitors or staff can interact with older residents. Additionally, furniture can be easily moved to accommodate different group activities (Dementia Services Development Centre, 2009). However, the spatial dimensions, the ceiling height, the lack of domestic appearance may negatively influence residents' experience. The Rudolf, although, is the exception. The West Bock's dining room comes up with two spaces of different spatial dimension. One accommodates a more significant number of residents while the other accommodates a small number (Professional Caregiver Interview, 2018). They, together with the multipurpose room and staff offices and changing rooms, however, are a very short distance from residential units (Dementia Services Development Centre, 2009).

The Humanitas, the Rudolf and the Gojikara embed spaces for meaningful occupation such as a little shop, gym, restaurant, art and craft workshop/shop, hairstylist, manicurist, a wellbeing centre, communal rooms and green areas. In this, residents do some light gardening or other activities during the day, and residents can quickly move from indoor communal areas and outdoor green areas. Additionally, they are opportunely furnished with benches, gazebos, pergolas, etc. However, the reduced number of elevators in the Humanitas© and Rudolf©, while the Gojikara Mura© green area on a steep slope negatively affects the accessibility of outdoor spaces (Resident Interview, 2017, a; Resident Interview, 2017, b; Evans 2003; Hoglund and Ledewitz, 1999).

In this, the three case studies do not fulfil many of the more recent age and dementia

404

friendly design standards. Nevertheless, the Humanitas© and Rudolf©, the Gojikara Mura© propose an alternate paradigm of care compared to conventional care models. It has positively informed their architectural frames, and occupants' well-being and economies. Consequently, standards are central in planning or designing, but they cannot enhance and dignify inhabitants' personal experience of the built environment (Turner 1972; Walker 2011; Hopflinger, 2008).

Section 1: Theming 1: A New Paradigm Of Care

Societies are struggling to make social and financial sense of the ageing society phenomenon in particular where people have long-term conditions such as dementia (Whipple, 2017). Despite the increasing availability of older adult care services, they appear not able to adequately address the challenges of an ageing society (Kelley, and Meier, 2010). Conventional social and health care services and professionals such as private nursing homes, private residential care, housing associations, and sheltered housing, NHS community occupational therapists, clinical psychologists, etc. are costly (Curtis, and Netten, 2017). Additionally, older adult care can be a challenge for professionals and informal caregivers. Families describe these challenges as investing a considerable amount of time and care to be emotionally and physically consuming (Ayres, 2000). Professional caregivers' challenges include managing a complex job with long working hours, being subject to injuries and sometimes being poorly paid (Zimmerman et al., 2005). These challenges directly impact upon the older adults and also their caregivers' health and wellbeing (Kawachi, and Kennedy, 1997).

Consequently, assisting older adults with complex needs requires time and effort, and a multi-disciplinary way of working which embodies innovative strategies (Kang, 2012; Ayres, 2000). Nowadays, the integration of different care systems and competences is fundamental (De Jong, and Jackson, 2001). An example is the combined model

of health and social care services in the Somerset Trust, south-west of England (Peck et al. 2009), or the adoption of new person-centred care approaches such as the "Embodied Selfhood." It refers to the theoretical work of Merleau-Ponty which attempted to reveal the interrelationship between sociocultural and primordial characteristics of the body (Kontos, 2005). In addition, Professor Jane Dacre, president of the Royal College of Physicians, has stressed the strategic importance of integrating different care models in order to promote the required services shift. Even if this takes time it still benefits evaluation (Sansom, 2017). The World Health Organisation (WHO) published a report in 2012 emphasising the need for collaboration between different categories of care providers, and professionals to address the challenges dementia can present at a personal and societal level (WHO, 2012; Kang 2012). This way of working applies to the Humanitas© Deventer (i.e. 166 older adult residents, 200 volunteers, 200 professional caregivers and six students). Of course, this way of working has its challenges after the decision of the Dutch Government to reduce economic support to older adults' care, the Humanitas CEO at the time, had to dismiss an essential number of professional caregivers. Consequently, the organisation was no longer able to provide the same service. To address this challenge, there was a move towards working closer to academia and research in order to develop a new care model. The Nursing Home was opened up to different social and age categories, who became volunteers and new residents (Manager Interview, 2017, a).

The Rudolf© have adopted a similar conceptual approach i.e. 102 older adult residents, 18 Young Adults with mental disabilities, 91 professional caregivers, 20 volunteers, four Young adults/students. The manager and architect of A Home that Fits project used the Dutch case study as a precedent. Unlike the Humanitas©, the Rudolf© aimed to tackle youth homelessness and young and older adult loneliness. Residents' come from difficult socio-economic backgrounds. The lack of funding counterbalanced by the informal network (i.e. the Helsinki Department of Youth, and the Helsinki Health

Care Department) fostered this alternate housing solution (Manager Interview, 2018). In contrast to earlier case studies, however, the Gojikara Mura© went through a different process while the result has strong similarities. The Gojikara Mura© embodies the vision of the founding member. A first priority was the protection of the existing natural environment from pressing urban development. Secondly, different older adults' care provision, which was not underpinned by efficiency peculiar to conventional institutional settings. By combining a natural environment, a children's day-care centre, a nursing home, a kindergarten, an assisted living unit, a community centre, a secondary school, nursing school, café/restaurant, and art and craft shop/workshop and its occupants (i.e. 130 older adults residents, 220 professional caregivers, 200 volunteers, 300 enrolled students, 215 children), a diverse care village was created (Manager Interview, 2017, b).

Table 2: Older Adult Residents' Gender and Age Constitution

	Gojikara Mura©	Humanitas©	Rudolf©
Males	31	76	81
Females	99	84	43
Average Age - Male	79.5 years old	78 years old	80.3 years old
Average Age - Female	82 years old	81 years old	82.9 years old

Source: Data Adapted from Interview with Author 2017/2018.

Furthermore, people are anxious about ageing. This anxiety is partially understandable since we cannot know how the last part of our lives will turn out. In particular, this is within a context that is redefining itself and where old age is very often associated with a negative image. An 'individualised context' in which people are not automatically part of a stabilising social framework, this becomes more challenging in old age in order to maintain their mental equilibrium (Hopflinger, 2008). The social and professional

networks that surround people, in particular older adults positively effect their well-being (Berkman et al., 2014; Berkman et al., 2003; Brown et al. 2009; Cornman et al., 2003; Krause et al., 1989; Liang et al., 2001; Lubben, 1988; Newsom, and Schulz, 1996; Shaw, 2005; Cohen, 2004; Berke et al., 2007). Relevant is the informality of relationship. Spontaneity and freedom from relational obligation promote older adults' participation, embedment in their social roles, and reduces their vulnerability (Cohen, and Wills, 1985; Krause, 1996; Krause, 1993; Krause, 1995; Jang et al., 2002). This same informality can also be found in the admission of students and young families. Additionally, it positively affects the common concern about leaving their own houses and moving in more traditional settings. Even if older adults who present mental and physical impairments such as dementia tend to lose their social network and support (Krause et al., 1989, Krause and Liang, 1993; Kang, 2012), supportive and social encounters directly positively affects older adults' mental health (Brown et al, 2009; Krause, 1995). The ageing process and functional decline slow down. Social ties and engagement directly influence memory and its decline, distress symptoms and avoid depression. This produces a certain "cognitive resilience" in particular in older age (Berkman et al., 2014; Berkman et al., 2003; Jang et al., 2002, House et al. 1988; Kang, 2012). Consequently, the reduction of stereotyped and negative attitudes between older adults and young adults facilitates positive attitudes (e.g. sociological, psychological and neurological) and behaviours (Lokon et al., 2018; Alant et al., 2015). According to geriatricians who have been seeing older residents, the simple presence of the students positively contributes to slowing down the advancement of Alzheimer, depression, and reduces blood pressure.

This study has additionally shown that there is a link between the mental decline and mortality of older adults and their interaction with the students (Del Re, 2017). This was also reported by residents and professional caregivers from the Gojikara Mura© and the Rudolf© (Professional Caregiver Interview, 2017, b; Resident Interview, 2017,

b; Professional Caregiver Interview, 2018; Resident Interview, 2018). At the Gojikara Mura©, for example, participants used the expression: "their hearts move/beat" to illustrate the benefits of an alternate group of relationship. Unlike the Humanitas©, there are no medical studies or findings for the latter two case studies that support the previous participants' comments. Additionally, a diverse social network may contribute in preserving or developing certain kind of abilities such as the use of public transportation, smartphones, PC, internet, etc. (Newsom and Schulz, 1996). Humanitas©'s residents have developed a constructive interaction with technologies through the interaction with the young residents (Resident Interview, 2017, a). While Gojikara Mura©'s residents are engaged in several activities such as DIY, the Rudolf©'s residents go to concerts, bake, etc. (Resident Interview, 2017, b; Resident Interview, 2018).

The built environment indirectly affects the mental wellbeing of users (Evans, 2003) in particular older adults (Kerr et al., 2012) – see Table 2, p. 403. Factors such as the crowding and the group size of people living together, the noise, the indoor air quality, light, colours and personal control are directly determined by the built environment. The social interaction, therefore, is obtained through the adoption of proximity and gathering points. This also maximises direct observation (Evans, 2003; Brown et al. 2009; Kerr et al., 2012). For example, a study on clustered homes with a central shared space showed an increase in spontaneous social interaction among older residents (Abu-Ghazzeh, 1999). Despite the institutional character of the Humanitas© and the Rudolf© (Resident Interview, 2017, a; Resident Interview, 2018), it is found that the refurbishment of the two facilities and the symbiosis between nature and artifice at the Gojikara Mura© allows increasing the number of collective spaces. Residents, staff, volunteers use them as places for parties, informal and formal meetings. Together with the opening to other external activities these spaces have generated a robust social pattern in which older adults are embedded (Resident Interview, 2017, b; Cohen, and

Wills, 1985; Krause, 1996; Krause and Liang 1993; Krause, 1995; Jang et al, 2002; Evans, 2003; Brown, et al. 2009; Kerr et al., 2012).

In addition, the built environment facilitates the provision of care by professional caregivers (Hoglund and Ledewitz, 1999). As predictable, staff members showed an awareness of the limit of the actual spaces and materials. Consequently, these results suggest that the characteristics of the built environement (e.g., outdoor green areas, communal spaces, etc.) influence social interactions and behavioural health in older adult residents (Evans, 2003; Brown et al. 2009; Kerr et al., 2012) while supporting a new paradigm of care. Consequently, it is a new way of sharing responsibilities and defined by Feddersen and Ludtke (2014) as "caring communities" (WHO, 2012; Kang 2012) that captures the relational nature of caregiving (Nolan, 2002). It underlines the strategic importance of collaboration between different categories of care providers such as psychiatrists, neurologists, psychologists, nurses, general practitioners, occupational therapists and community/ social workers who can share their expertise and collaborate. The communal sense is, therefore, strengthened by the equal relationship between volunteers, professional caregivers, students and older residents. Nevertheless, the number of students and young adults will not increase because caring for older people is their main purpose for all three case studies (Manager Interview, 2017, b; Manager Interview, 2017, a; Manager Interview, 2018).

It is essential to bear in mind the possible risks for this new paradigm of care. By welcoming other age and social groups, their members embrace responsibilities that in conventional models do not concern them. Participants to the study described them as "principles of good will and neighbouring" (Professional Caregiver, 2017, a; Professional Caregiver, 2017, b; Professional Caregiver, 2018). Additionally, these settings may have emotional and psychological implications on the younger residents (Resident Interview, 2017, a; Resident Interview, 2018). It can, therefore, be

ascertained that it was central in Rudolf© and the Humanitas© to identify students who would fully accept the principles of these innovative housing solutions (e.g. two young adults at Rudolf© could not effectively contribute to the model; Manager Interview, 2017; Manager Interview, 2018). While the loose Gojikara Mura© model and physical settings have different repercussions on its occupants. The cultural frame filters other age and social groups' responsibilities as a social duty (Traphagan, 2006). According to this data, however, I can infer that "rules and regulation" (Professional Caregiver Interview, 2018) or notion of "perfection" (Professional Caregiver Interview, 2017, b) that are concerned with efficiency and safety of long-term care facilities are not the priority for the three case studies.

Most European countries such as France and Germany strongly promote intergenerational housing concepts such as intergenerational co-housing, student-senior home sharing, etc. This concept has several, theoretical advantages (Forbes, 2002; Labit, and Dubost, 2016; Glass, 2009), echoing the past structure of households in which solidarity was spontaneous; but in practice, this model should be adopted carefully (Labit, and Dubost, 2016). However, the Humanitas©, the Rudolf©, the Gojikara Mura© provide an innovative and more formal model compared to the existing intergenerational co-housing or student-senior home sharing. It can improve residents and professionals experiences and productivity, generating a value not only measurable from an economic and clinical perspective, with the potential to be a replicable care model in similar settings and different contexts (Department of Health, 2011; Leng, 2012). The Humanitas©, the Rudolf©, the Gojikara Mura© may be an 'architectural frame' for the future, a frame that revolutionises the conventional institutions through which the problems of the older adults emerged (Levy 2017; Ayalon 2015; Hagestad and Uhlenberg 2005; Townsend, 1981).

Theming 2: Redefining The Notion Of Typology

In this study, it is interesting to note that all the three cases showed limitations in terms of age and dementia-friendly design principles. In this, the Humanitas©, the Rudolf©, the Gojikara Mura© propose a paradigm of care which welcome alternate age and social groups beyond professional care providers and responsibilities. The three examples are the outcomes of an inseparable contribution of a diversified spectrum of inhabitants i.e. the founding member, the CEO, architects, professional caregivers, volunteers, young and old residents (Franck and Stevens, 2007). The three analytical phases, the "Thinking, Making and Living" (Landi, 2017), confirm how their contribution covers the whole process from their conception to their occupation. The thinking phase, for example, revealed that the Humanitas©' CEO was keen to move closer to academia to develop a new care model after the dismissal of a consistent number of professional caregivers (Manager Interview, 2017, a). Similarly, the *A Home that Fits* project attempted to reduce stigma towards not only older adults but also young adults and their homelessness. In this, an innovative housing solution was conceived by means of collaboration, experimentation and design methodologies. The architect was a facilitator in this process (Designer Interview, 2018). While the Gojikara Mura©'s founder member created a forward-looking care model by blurring the interaction of different age groups, and the tutelage of the existing natural environment. The architect was central in translating it into physical settings (Designer Interview, 2017, b).

The making phase, instead, delineated the physical settings of the three case studies according to their conceptual backing. The refurbishment of the functionalist Finnish and Dutch cases or the incremental development and notion of "inclusion" also in term of works of architecture (i.e. the relocation of two existing farmhouses from the surrounding areas) of the Gojikara Mura© are remarkable examples.

The living phase outlined the contribution of occupants such as older and young residents, professional caregivers and volunteers to the physical and social patterns of three case studies. For instance, the DIY at the Gojikara Mura© or the partnership between the professional caregivers and residents in the design of interior spaces confirm this (Resident Interview, 2017, a; Resident Interview, 2017, b; Resident Interview, 2018). Consequently, this contribution has had an evolutionary process that informed not only unconventional socio-spatial practices embodied in three case studies (Harvey, 1996) but also their physical environments. Alexander (1973) described it as a "self-adjusting unconscious cultural process," which aims to redefine a new equilibrium within the contemporary context.

In reviewing the literature, the study illustrated how the contemporary Dutch, Finnish, and Japanese socio-demographic and economic contexts present same challenges (i.e. ageing population structure; the rising number of older adults with long-term conditions; the spiralling cost of long-term healthcare services; and the shrinking household structure) beside their anthropological frames. Once again, Alexander (1973) named all these unself-conscious agents and challenges, which are latent in our contemporaneity as "culture." It, thereby, emphasises a sense of belonging, purpose, place identity, and a "sense of place" (Fang et al., 2016). This is not related to a geographical location or time while it is a consequence of a sense of attachment, and of evolving social practices (Fang et al., 2016; Harvey, 1996). The participants to the study on the whole, for example, demonstrated how they feel more comfortable to move in and stay in the investigated cases (Resident Interview, 2017, a; Resident Interview, 2017, b; Resident Interview, 2018). Therefore, the physical settings are differently understood (Harvey, 1996) – see Table 3, p. 410.

Table 3: Area Constitution

Areas	Gojikara Mura© (m²)	Humanitas© (m²)	Rudolf© (m²)
Communal (i.e. community center, multipurpose room, etc.)	1,941.8 (336.5 – Ground Floor)	2,093 (893 - Ground Floor)	963.1 (171.7 – Ground Floor)
Entrepreneurs' Hub	0	815.5	0
Shopping (i.e. shop; café; bookshop, hairstylist; restaurant; gym; sauna; beautician and SPA)	360.2	206.1	524.9
Educational (i.e. research container; kindergarten, nursing and vocational school and children day care center)	2,250.2	29	0
Green	29,971.8	2,895.6	7,358.4
Total	50,000	9,240	8,846.4

Source: Data Adapted from Interview with Author 2017/2018, and Anderzhon et al., 2012

This may inform different design principles that overlap with the "open system" theory (Sennett, 2018; Sennett, 2008; GSD, 2016a; Sennett, 2006; GSD, 2017). Consequently, the three illustrated case studies may represent a unique architectural frame, the "open type." In particular, Humanitas and Gojikara Mura behave as a "membrane" (the "passage of territories"); they are "resistant" while "porous" (Sennett, 2017; Sennett, 2008; GSD, 2016 a; Sennett, 2006; GSD, 2017). From one perspective, the Dutch, the Finnish and Japanese case studies as institutional settings generate a secure environment; from another, the hosted activities/services. The first case study proposes an interior 'shopping boulevard,' with a supermarket, a café/pub, a hairdresser, a library, a wellness centre, a beautician and a physiotherapist; and an 'entrepreneurs hub' which hosts a tattoo removal lab; or a social enterprise which provides social support to Deventer's citizens. Additionally, one of the young residents started a "research lab." The second case study offers a gym with no admission costs, a restaurant, and a social enterprise, which provides social support to Laajasalo's young adult citizens with mental disabilities.

The third case study with its peculiar strong presence of the natural environment that penetrates through the different facilities allows juxtaposition of different services such as secondary school/vocational school, nursing home, community centre, kindergarten, assisted living, community centre, nursing school, café/restaurant, art and craft shop/ workshop, and children day-care centre. Taken together, they produce a unique interrelation pattern between different groups of people that confirms their openness towards a wider public. However, there is an ambiguity within their boundaries. In this, occupants perceive themselves as incomplete, limited, so in constant evolution (Sennett, 1970). All of the three examples do not have an entrance gate. Therefore, they do not have barriers that stop the case studies' inhabitants and members of the surrounding communities to use the environment in ways that are more complete. This stimulates the mixture of people and of their experiences. In this, dead edges and in/out thresholds peculiar to more conventional long terms care facilities are avoided. While the absence of entrance gates is strictly related to the physical domain, it has strong psychological and social repercussions. For example, the Humanitas© has welcomed an increasing number of volunteers both university students and Deventer citizens; while local entrepreneurs use some of the communal spaces for doing job interviews, and formal meetings. Laajasalo's residents, instead, do jogging in the Rodolf©'s central green area. Similarly, the Gojikara Mura© outdoor green areas encourage young mothers of the surrounding community and their children to gather for informal chats and activities (Professional Caregiver Interview 2017, a; Resident Interview, 2017, b; Resident Interviews, 2018). Additionally, the Rudolf©'s main entrance, for instance, is a welcoming space with no reception desk, although it has armchairs, tea table and benches. The Humanitas© has a reception desk, although it is mediated by a small library and some sofas, armchairs and tables. There visitors and residents can stop for a chat and a cup of tea. Interestingly, Gojikara Mura© has speculated mainly on this. It does not have reception desks but, instead, cafes welcoming visitors. The families, volunteers, professional caregivers, and students are what was defined by Jacobs

(1961, p. 36) as "the eyes on the street."

This allows the "development of narratives" in which multiple interactions occur (Sennett, 2006; Sennett, 2008; GSD, 2016 a). These include conversations between older adults and mothers who take their children to the Gojikara Mura kindergarten about arrangements of the living environment with older residents (Anderzhon et al., 2012). The collaborative growth of vegetables on the roof garden between older adults, volunteers and children from the kindergarten; or local artists who work in partnership with older residents to the making of works of art to be exhibited and sold them at the art and craft shop are additional examples (Professional Caregiver Interview, 2017, b; Welzel – Connolly, 2014). The Humanitas©, instead, showed a set of narratives which followed the maximisation of the social/communal spaces, and the presence of outdoor "formal and vegetable" gardens. On the one side, the students teach the use of technologies (i.e. social networks, tablets, e-mails, etc.), or prepare simple meals to share. On the other side, older adults tell the students their life experiences or teach traditional hobbies (i.e. playing a guitar, etc.). Furthermore, the collaborative preparation of simple meals at Humanitas confirm these narratives, which happen on a daily basis, while the gardens are central to residents' social life. The "vegetable garden" is managed by residents (both older adults and students), and volunteers. The "formal garden" hosts recreational and collective activities during spring and summer, so residents can stop and admire it or watch the world goes by (Resident Interview, 2017, a). The Rudolf© confirms this. The midsummer festival party in which young families and children from the surrounding kindergarten or the Easter chocolate eggs hunt in the central green area are outstanding examples. While on a daily basis, young adult residents read aloud newspaper or books, bake cinnamon rolls together with their older neighbours (The Guardian, 2017, Resident Interview, 2018). They are, therefore, unique contexts possible only through the consolidated "unity of differences" (Lefebvre, 2003; Hetherington, 1997). It is a context that turns a simple look into people's eyes

into "meaningful relationships" not related to time but to spontaneity (Fang et al., 2016, Pierce et al., 2010; Brownie and Nancarrow, 2013; Dewar and Nolan, 2012; Brown, 2009; Massey, 2005; Schutz, 1972). This strengthens the "sense of place." Therefore, older residents with more severe mental and physical conditions are kept visually involved (Resident Interview, 2017, b). The work of memory goes on through practising their interiority, as "a particular relation with the world," or exteriority, as a collective physical contribution (Sennett, 2012; GSD, 2016b). In a certain sense, they complete the wide spectrum of physical and psychological interactions, which are embedded in the three cases. In this, older and young occupants can better understand themselves in relation with another one "connected yet distinct" (Mostafavi, 2017). Therefore, older adults do what they are still able to do; and the students learn how to slow down and increase their awareness of old age. A "traffic of living is produced, and the whole is better than the sum of its parts" (Sennett, 1993, pp. 196).

Furthermore, the three examples are synonymous of an incomplete and so inconstant, evolution in human nature, which asks for cooperation (Sennett, 2012, Sennett, 1970). The architectural frames embody this. The Humanitas© and Rudolf© own the capability in accommodating diverse services not only after their refurbishments but also over their occupation. Surprisingly, the former showed a resilience beyond its Dutch functionalist design. This allowed the case study to adapt itself to the new care model and activities while to accommodate some of the contemporary society's technological achievements. For example, corridors become electric moped parks during meal times. The addition of the research container and on-site made outdoor furniture, gazebos and pergolas for the two gardens more clearly affirm this. The latter, instead, has more strong physical limitations such as steep ramps and structural columns in the middle of rooms. However, the indoor gym and the restaurant open to the public, together with the central green area that was further equipped with an outdoor gym, a pergola, two kiosks and outdoor furniture endorse an incompleteness. The case studies, therefore,

become part of the consolidated urban fabric and thereby maximise the experience of it by different people (Mostafavi, 2017).The Gojikara Mura©, instead, has had a more evident incremental expansion. The 1981 opening of the Children Day-Care centre was extended six years after with a nursing home. They were followed by a kindergarten, an assisted living, a community centre, a secondary school. The eclectic Gojikara Mura© also includes two farmhouses from the surrounding areas that emphasise its incompleteness. Consequently, these attribute to the case studies an "incomplete form." These principles preserve the possibilities for future participated changes (Sennett, 2012) at all the three analytical phases, the "thinking, making and living" and so the case studies become containers of "democratic spaces" (Sennett, 2006; Sennett, 2008; GSD, 2016a). The results until this section indicate that the Humanitas©, the Rudolf© and the Gojikara Mura© may embody the principles of a new notion of type: 'the open type.' However, it would be reductive and redundant if it would be limited to a participated contribution at the all three analytical phases. The next section moves on to discuss the alternate order of older adults' long-term care facilities underpinned by the notion of "heterotopia" (Borasi and Zardini 2012; Harvey 2002; Hetherington 1997; Foucault 1984).

Section 2: Open Types As Heterotopia

The prior critical analysis on the notion of "heterotopia" has allowed me to untangle the meaning attributed to the "heterotopia" in this study. By revealing also parallels with Matta-Clark's works, the "heterotopia" as architectural frame exists only in relation to settings, which are more conventional. Therefore, it proposes settings in which an alternate mode of thinking and making is performed, and thereby of social ordering is generated. The "heterotopia" does not indicate the social order, although it only provides the stage for alternate social order (Hetherington 1997, Franck and Stevens 2007). The "open type," therefore, reveals indisputable connections with

the here adopted notion of "heterotopia." Compared with more institutional facilities, the Gojikara Mura©, the Rudolf© and the Humanitas© are real places, stages for the everyday life in which repetition and spontaneity coexist. The findings suggest that "open type" is the architectural frame for new social space, a different mode of ambiguous existence against homogenising and fragmenting factors. The "open type" comprises an ambiguity characterising family and familiar settings but not formal or functional ones. The Humanitas©'s young resident who led his old neighbour suffering from Alzheimer's to her apartment after a glass of wine is an example (Resident Interview, 2017, a). Additionally, the notions of "everyday life" and "social space," refer to the work of Henri Lefebvre (1991). In the 1947 book Critique on Everyday Life, the author investigated quotidian life experiences after the advent of mass production and thereby consumption. Words such as "function" and "functionality" were introduced. Since then, a sense of inauthenticity and social control mediated these experiences. The everyday life was no longer real. Consequently, Lefebvre underlined the importance of "ambiguity" which is peculiar to every day (Lefebvre, 1991; p. 515). Michel de Certeau is another author from the phenomenological school who investigated the everyday life, its procedures and its rituals and its dualism with the modern prescriptive condition. De Certeau's most significant work is the book *The Practice of EveryDay Life* (De Certeau, 1984). While lacking consistency in the way that the author binds his arguments, findings and theories, it provides additional and meaningful insight for this study to the effects of established formal and functional settings that transformed humans to simple objects who were subject to manipulation. This is clearly explored with concepts such as "strategy" and "tactics" (De Certeau, 1984, pp. xii). However, de Certeau remarks in his conclusion that the everyday experiences of place such as "practised streets by walkers" (De Certeau, 1984, pp. 117) are a consequence of unexpected experiences in a temporal structure. They, although, are underpinned by a permanent act of thinking. This is possible in complex and stratified contexts than with functionalist determinism.

The question of modernity and its technological achievements were dear also to Martin Heidegger. In the 1951 lecture "Building Dwelling Thinking," the German philosopher tackled the negative aspects that modernism brought to the built environment. Heidegger pointed out how technocratic functionalism which was informed before by a different economic model, later it was translated into architecture (i.e. architecture as "a machine for living;" Illies and Ray, 2014, pp. 77) transforms humans to simple passive subjects who are informed by established rules. Therefore, the built environment lost its capacity to let dwell. In this, human beings were not able to build and to dwell. For Heidegger, therefore, to dwell was an expression of "being" and thereby of thinking. It would attribute a continuity between human beings and everyday space, a real consistency, while rejecting the modern divide. This division was the consequence of the adoption of a wrong philosophy (Heidegger, 1993).

The German philosopher further expanded his arguments on everyday experiences in the 1953 book *Being and Time* (Heidegger, 2010). To do this, the book unconventionally combines a phenomenological approach to an ontological investigation on being a subject aware of one's own experiences in the world rather than a thing. It refers to the notion of dwelling beneath the sky and on the earth. In particular, Heidegger argues that the essence of experiences and thereby of being lies in the familiarity of them. It allows overcoming the gap between oneself and the outer world. This gap was introduced by the tentative of a formal interpretation of the everyday. For example, it is inauthentic and expression of social control to empirically question or reconstruct behaviours and existences of other human beings in the world in order to understand and thereby being with them. The reality of the everyday is, therefore, negatively affected. The German philosopher suggests an emphatic approach to the everyday that prioritises the being with others with familiarity. This argument is further extended in the second division of the book. The author moves from the phenomenology of everyday human life to more abstract issues such as time and extreme conditions.

For Heidegger, being a subject aware of one own experiences in the world welcomes unexpected, ambiguous and extreme conditions. These experiences generate a sense of displacement, of homelessness. They, therefore, question different possibilities of being and thereby to dwell. Time in the sense of temporal structures is central in the development of self-awareness for being a subject in the world. Each experience has its duration. A week spent in the hospital, a restless night, an afternoon during which a young resident calms down an old-resident who threats a professional caregiver, for instance, are extreme conditions with a specific temporal structure. Heidegger frames them as situations that allows human beings to dwell in the world. It is a genuine way of dwelling that cannot be achieved through a functionalist dictatorship (Heidegger, 2010). By taking this into consideration, an authentic social space may be created. A work of architecture becomes a construction of "borders" (Sennett, 2017) in space (Harries, 1997). The term social refers to the notion of a collectiveness, which is opposite to its political meaning that conventionally regulate it. The authentic social space, therefore, would be the frame for every day and not just is a functional avatar. It implies social growth (Lefebvre, 1991) which is linked to the essence of dwelling and thereby to being. Parallel forms of resistance against more prescriptive and conventional older adults' long-term care facilities, therefore, can be found in the analysed case studies. For example, the three case studies and their intergenerational settings produce genuine and reciprocal relationships, which are sometimes characterised by extreme conditions. The three cases, however, minimise conventional impersonal or professional caregiving proposals synonymous of a pessimistic view of older adults' human conditions (Sennett 2003), that social growth is underpinned by reciprocity is also outlined by the idea of the 1973 Harvey book *Social Justice and the City*. The three parts of the analysis, which he termed *Liberal Formulations*, *Socialist Formulations and Synthesis*, led the author to a critique of the Lefebvrian (1996) notions of urbanism and the right to the city. In this, Harvey acknowledged that social growth is found in diverse places from functional ones such as the mutual support of diverse and dense neighbourhoods

in a community. All this may seem nothing more than common sense, although it is not that obvious in older adults' long-term care facilities. However, the economy of reciprocity is not able to support traditional urban and architectural strategies (Harvey, 2009). Consequently, as Harries (1997) shows, this may set the stage for alternate works of architecture. While Harries' arguments embody a final utopian idealism, they undertake a critical journey through aesthetical value of architecture in which traditional urban and architectural strategies, such as a narrow functionalism can be considered as an unnecessary ornament that do not speak anymore to its occupants. The need for alternate works of architecture promotes new forms of individual and communal life. These foster their occupants' return to the everyday experience of life.

Lefebvre further developed these arguments to embrace them through spatial production. In the *Production of Space* (1992), the author aimed to establish an equilibrium between different generative forces of space. He did neither reject functionalist production forces nor fully embrace social ones, while Lefebvre suggested a comprehensive use and management of the different production forces. In more recent years, this necessity of continuity between diverse and sometimes opposite realms was investigated by authors like Bruno Latour and Peter Sloterdijk. While this continuity concerns human nature for both authors, the former, in *We Have Never Been Modern* (Latour, 1991) argues that the modernist division between science and nature has never been effective. Over time, this has produced informal hybrids. The contemporaneity, instead, requires an acknowledgement of this production. In the same vein, the latter uses the metaphor of bubbles as micro-scale spheres for the narration of a metaphysical history of intimate and generative spaces or situations such as wombs, real or utopian domes, the relationship between humans and God. In particular, *Bubbles* (Sloterdijk,1998) is the first volume of a trilogy in which spheres becomes spaces coexistences at different scales.

If Latour's (1991) vision attempts to form an internal continuity, Sloterdijk (1998) frames an external continuity through the permeable membrane of spheres. This also accords with my earlier observations, which showed that the different contribution to the production of spaces by different subjects establishes continuity between formal and informal generative forces of space. The Thinking, the Making and Living, or to use Heidegger's terms (1993) "Building, Dwelling, Thinking," of a work of architecture become strictly bound. While this may generate a sense of displacement in the occupants of this new forms architecture, it is inevitable to genuinely be in the world every day (Harries, 1997). The three case studies, therefore, become a space of "margins," an open and blurred environment (Hetherington 1997, 27; Franck and Stevens 2007). They might imply some lifestyle changes for residents (e.g. one of the young residents became more sociable since moving in Rudolf©; or older adults' engagement in Gojikara Mura©'s DIY activities without specific skills or previous experience; Resident Interview 2017, b; Resident Interview 2018). Nevertheless, a socially inclusive order is defined, which is unequivocally different from more conventional older adults' long-term facilities. In this, as previously indicated in the discussion, the architectural frame also positively affects older humans' and caregivers' wellbeing (Berkman et al. 2014; Brown et al. 2009; Cornman et al. 2003; Liang et al. 2001; Shaw 2005; Cohen 2004; Berke et al. 2007; Jang et al. 2002). Consequently, the three cases offer an alternate approach to health participation while still providing secure environments. Even if some services are difficult to access or are not provided, the Humanitas©, the Rudolf©, and the Gojikara Mura© may constitute "liveable environments" (MetLife, 2013).

It is somewhat surprising that the results of this study can be more roundly explained by taking into account the Japanese, Dutch and Finnish household and family structures. As mentioned in the literature review, the household structure has progressively shifted from including multigenerational families to older and isolated parents. Inevitably, space has shifted from being shared to disconnected (Shirahase 2014; Laslett, 1972). Over

time, the succession of various socio-economic patterns has had direct repercussions. Markus (1993; p. 37) framed this relationship between socio-economic patterns and formal and configurational properties of buildings with the term "spatial structures." Therefore, this impermanent condition of our socio-economic patterns has required, in this particular study, alternate spatial solutions and long-term care types that echoes precedents from the past.

The three case studies, therefore, are "spatial structures," which conceptually link them with historical, social structures and dynamics (Landi, 2017). In this particular study, these are the previous household structures. In this, the innovative long-term care types recall past long-term care types. For example, the Gojikara Mura© in Japan embodies the principles of "MURA." It means a village system. In case of socio-economic difficulties, the members of the village support each other in any aspect of their lives and take part in a reciprocal exchange of help (Hisano et al. 2018; Fukutake 1989; Nakane, 1970). The Humanitas© and Rudolf© have parallels with the Geel philosophy. Geel is a market town in the Belgian countryside. Here, Geel citizens have informally hosted people with mental and physical disabilities in their homes as guests or "boarders." Coming from all around Europe, they have been accommodated without a clinical diagnosis or a backstory. Consequently, Geel citizens have never referred to terms such as "mentally ill", "psychiatric" or "patients." Additionally, the long-term care has been provided through two layers. First, were families and their children. Second, were medical institutions and facilities. Inevitably, the advent of modern medicine has had a negative impact on the Geel model, and thereby the number of "boarders" has decreased over time (Jay, 2014; Jay, 2016). This idea is a part of our cultural and anthropological heritage. It acknowledges an impossibility of creation in a historical vacuum, which is in line with a typological approach. Supported by the analogy with jazz music and improvisation, Fesmire (2003) abundantly discusses the interdependence of an act of creation with other objects in his investigations on Dewey's ethics

and notion of moral imagination. Sennett (2018) describes this looking towards the past, which symbolises an unsatisfactory and confusing contemporaneity through Paul Klee's paint: Angelus Novus.

To conclude this section, it can, therefore, be assumed that the open type, which is grounded in Sennett's theory on open systems, as "heterotopia" translates mutations of the contemporary culture and its challenges into the architectural frame. They refer to cultural or historical precedents. However, this generates social growth and inclusion. On the one hand, the adoption of an alternate approach to architecture forces architects to think of and make architecture as a medium for the exploration of participatory strategies, and the creation of continuity and synergies concerning different domains. On the other hand, the open type as "heterotopia" not only implies the use of collaborative and socially inclusive design principles, but it imposes the creation of a social space that accommodates a multidisciplinary, collaborative and socially inclusive order as a result. In this particular study, it is represented through a diverse order of older adults' long-term care facilities, which usually are underpinned by hierarchical decision-making and efficiency. Indeed, the open type has ethical implications. They concern professionals and inhabitants. Consequently, the following section discusses the open type through its ethics. They, however, are underpinned by the Aristotelian notion of ethics (Curzer, 2012; Smith, 2017). This completes the discussion surrounding a renewed notion of types.

Section 3: The Ethics of The Open Type

As mentioned already in this discussion, the study takes into consideration substantially different socio-demographic and economic landscapes (i.e. improved but stagnant economies, a reduction in infant mortality, and a growing number of adults living longer, and better health care systems). Nevertheless, they have downsides, which

concern the economic and social realms. While long-term and high dependency care services expenditures are spiralling according to the rising figure of people with dementia (European Union, 2015), older adults are subject to stigmatisation and segregation patterns for the sake of efficiency and performance (Townsend, 198; Levy 2017; Ayalon 2015). This has fed a clear debate around the necessity to improve not only our built environment for an aged society but also a "social model of ageing" beyond its medical one (Myerson, 2017). The notion of open type introduced with this study falls in this gap. Far from functional labels (Markus 1993), the 'open type' aims to put together the different, and the possible (Sennett, 2018), to provide a social space for socially and economically inclusive order. It welcomes alternate minds of contributors in the thinking, making and living of a work of architecture. They foster a "self-adjusting" process (Alexander 1973) in which mutations are proposed slowly and incrementally. In this, what was before is not altered in its essence, and thereby mutations are absorbed and digested. Sennett (2018) defines this process as ethical. A continuity, therefore, is established between institutional settings, more democratic structures, and their occupants (Mostafavi, 2017). This section attempts to reveal the ethics of the 'open type' and its implication on its contributors. To do this, it is useful to return to the original conception of ethics and their application to professional bodies. Back then, the socio-economic context was entirely different from the contemporane-ous. However, this significantly supports the investigation around possible meaning for the open type and its inhabitants. The section, therefore, gives first a brief overview of the recent history and theories on ethics and their application to professions, and then it investigates their implications on the open type.

Ethics are a part of Philosophy that takes into consideration the modalities and the possibilities in addressing our lives according to virtuous and good principles. These are connected with the idea of living morally (Wasserman et al., 2000; Fesmire, 2003). Aristotle abundantly investigated it in his treatise on virtues. Ethics, therefore, fall into

Aristoteles' works of virtues and their theory. Curzer (2012) proposes a contemporary interpretation of these virtues. The author illustrates virtues of the character in the Nicomachean Ethics while refers to other Aristotle's writings such as the Rhetoric and the *Eudemian* Ethics. In this, the character and education of a subject are central to a moral action (Smith, 2017; Gallagher, 2004). Virtues, therefore, becomes an alternative to more pragmatic normative ethics (Fesmire, 2003). The new socio-economic matrix has shown the necessity of exploring new research and professional horizons such as human genetics. Nowadays, the ethical quest is again a central aspect of our lives. Historically, ethics was underpinned by some primitive or primary questions. These questions, for instance, concerned the limitations of personal liberties and interests against communal one. In any case, they embraced the notion of good will and thereby to do actions that aim for good outcomes. Inevitably, this established a contradiction. On the one hand, ethics investigated universal shared principles, duties and obligations. On the other hand, they attempted to preserve an individual state of mind. Consequently, ethics and ethical questions frame an equilibrium between individual and communal existences (Wasserman et al., 2000). In this, architecture becomes an ethical problem. It is about how to be in the world, to live and thereby how to dwell (Harries, 1997; Illies and Ray, 2014).

Over time, theorists and historians of ethics have more comprehensively identified different facets that constitute the subject. Smith (2017, pp. 93), for example, groups ethics in two main theoretical categories: "Normative and Non-normative Theories." The "Normative" theories untangle the dualism, which permeates through our lives. Intentions such as what is right or what is wrong are examples. In this, ethical principles may be identified (Fesmire, 2003; Smith, 2017). The "non-normative" theories describe moral conducts, beliefs and their meanings, while they do not investigate actual people's actions. In turn, "Non-Normative" theories can be divided into two sub-categories: "Descriptive Ethics and Metaethics" (Smith, 2017, pp. 82). For example,

Utilitarianism or Consequentialism examines relationships behind understanding whether a behaviour is ethical or not. Alternativly, *Principlism* is an ethical theory which fosters the use of moral principles in the decision-making process. *Deontology,* in contrast to *Utilitarianism,* focuses on actions to do something for good (Smith, 2017).

Additionally, other theories more strictly refer to more religious morality. *Relativism*, for instance, is an ethical theory that embraces differences as a tool for equal validation of different cultural values. *Egoism,* instead, is the branch of ethics that invite people to act according to their interests, while Feminist theories reveal how conventional ethical theories are structured around men and their values (Wasserman et al., 2000). It can thus be suggested that "to be ethical is to be human," and thereby ethical questions hold the right to inform human nature (Smith, 2017, pp. 5). Before applying this to the open type, it is essential to have a little insight into the theoretical framework of ethics that informed the architectural and caregiving professions.

Historically, architecture embodies the capacity of shaping the environment. While this has constituted a powerful tool, it has established a paradox. The paradox has lain in a contradictory perception of architecture through time. While architecture has been the tool of classy elites, it has also been an egalitarian tool to characterise the built environment that could be enjoyed by everyone (Hanson, 2001). In 1943, Winston Churchill stated: "Architecture is an act of human creation that once built, it conditions our existence." Consequently, this gave publicity to architecture as not just a mere response to some practical and thereby functional requirements of social elites. This statement fulfilled much more spiritual needs. Architecture, therefore, combines aesthetical as well as some symbolic meanings and social values. In this, it becomes an expression of civilisation. The analysis of the three case studies, for instance, showed the direct relationship between care models, and architectural frames, and living experiences.

Furthermore, time-wise, architecture concerns the future, and in here it comes the theme of the process again. Architecture is the consequence of a design, a construction, and inhabitation processes that change over time (Collier, 2006; Wasserman et al., 2000). Inevitably, they imply a series of relationships with different figures such as clients, contractors and material suppliers as well as the environment. For example, architects take into account the clients' vision while addressing it through other conceptual, social, environmental, technological and economic problems (Hanson, 2001; Wasserman et al., 2000). Architecture, therefore, becomes a collection of different practices while buildings and cities are containers of human dignity.

Consequently, architecture has a multi-layered system of ethical implications. Law and construction standards inform the minimum design requirements. Ethics, instead, provides a more robust framework that directly affects human values (Collier, 2006). Illies and Ray (2014, pp.59), for example, identify six relevant areas that concern architecture and ethics (i.e. "the morally acceptable and unacceptable nature of building; issue on professional behaviours and interaction during the planning design and construction phase; the impact of building on nature; the impact of the health and safety of those who use the building; the sociological influence in human behaviour; and the furnishing of symbolic and cultural meaning"). In this, architects, design processes and buildings are the three leading figures that are underpinned by ethics in architecture (Wasserman et al., 2000). The ethics of the open type affect all of the three leading figures. In particular, they concern not only architects but also with professional caregivers, and thereby with their respectively design process and care paradigm. In this, buildings are capable of promoting new forms of communal and individual life. For this reason, it is helpful to comprehend the ethics of professional bodies more roundly.

First, being an architect is a profession and thereby a particular kind of occupation. Architects are subject to a university curriculum in architecture, which is usually followed

by a few years of internship. Architects as interns are under the guidance of an expert in the subject. Only then, architects would obtain a professional license (Wasserman et al., 2000). Therefore, it is possible to assume that an architect as a professional embodies certain kinds of responsibilities and values (Guersenzvaig, 2018; Ray, 2005). In fact, an architect is a key figure who owns a specialised knowledge or master the knowledge and skills of design. Interaction with clients, contractors, design and business choices and self-critique, public presentation, as well as more theoretical disciplines such as history and theory, technological foundation are just examples of a broad spectrum of architects' knowledge. They, therefore, are capable of synthesising the contemporary context while translating its socioeconomic and environmental tensions into artefacts. Besides professional and ethical reasoning, architects have building regulations and laws to follow (Wasserman et al., 2000; Guersenzvaig, 2018).

Second, design processes attempt to generate works of architecture as their outcomes. They are containers of our lives, and thereby design processes have ethical implications on a work of architecture inhabitants' quality of life. In a certain sense, design processes and their leading figures have the responsibility of doing what is right to do in an apparent ideological contradiction. On the one hand, the practice of architecture is a social practice. It can reproduce and transform the world (Collier, 2006; Guersenzvaig, 2018; Wasserman et al., 2000). In this, it may ask for participation to generate equality, inclusion and diversity as in the analysed case studies (Guersenzvaig, 2018). On the other hand, the practice of architecture has a functional purpose, which can solve problems that are more physical. For example, the adoption of excellent design and standards.

Third are buildings. They can be considered as tangible outcomes of a design process whilst also being a work of architecture with aesthetical values. The former implies that all the figures who surround the making of a building must have an ethical sensibility.

While the latter represent probably the main driving factor in these figures' decisions (Collier, 2006; Wasserman et al., 2000; Ray, 2005). The contemporary aesthetic values of architecture, for example, do not necessarily refer to Vitruvian proportional beauty, although it is more close to the notion of utility (Lillegard, 2014; Wasserman et al., 2000). In all the cases, however, methods that are underpinned by critical reflections and lifelong learning are required.

Architects, therefore, embrace an ethical reasoning process. It is usually structured around the five steps: the definition of the ethical problem related to a work of architecture thereby its questioning; the framing of ethical contents; the speculation on possible alternatives and solutions, and thereby their evaluation; the outline of some possible alternatives; and the resolution of the problem through a proper ethical reasoning process (Wasserman et al., 2000). However, architects as proponents of a comprehensive profession must not take decisions, which are only suggested by pure ethical theories. They instead must adopt a "moral imagination" (Collier, 2006, pp. 316).

In this regard, Dewey's philosophical pragmatism helps to expand the discussion around "moral imagination" (Fesmire, 2003). For Dewey, it groups psychological capacities and primitive forces which come after a person' attitude in deliberating. This leads to "richer and emotionally engaged lives" (Fesmire, 2003; pp. 92). "Moral imagination" takes into account both individual and communal way of life. It is underpinned by a contextual understanding, and thereby there are not only one "moral imagination" but "moral imaginations." The American philosopher clusters in the act of deliberating a broad spectrum of activities such as visualisation of results, and dialogues. Nonetheless, Dewey considers them moral deliberations that implies ethical actions only when they follow situations and rehearsal. With no nostalgic reference, the former can be linked to the Heideggerian notion of situations, which are atypical and extreme. They set the

scene for the latter. In this, moral deliberations and ethical actions can be practised. Therefore, "moral imagination" becomes as normal as any other human activity. It informs an intelligence, which is keen on experimentations and seeing what is known and understood in new ways. In this, new forms of education take place. They refuse the modernist and functionalist distinction between "spectator and spectacle" (Fesmire, 2003, pp. 47; Ray, 2005). They instead are the result of an understanding of the actual and thereby coherent with the challenges posed by the contemporaneity. In this study, the new demographic structure and the increasing dementia rate are these challenges. Brenner et al. (2012, pp. 130) describe "moral imagination" as a "critical imagination." It embodies strongly intellectual and political values to produces a totally diverse type of built environment. While Yates (2016) provides a critical example which disentangles the relationship between the Mauri-Ora philosophy and design thinking and practice.

Second, professional caregivers, as well as the architect, is a profession that since 1889 implies a university curriculum, which is combined with training (Smith, 2017; Woods, 2005). In particular, professional caregiving for older adults/dementia is a long life learning experience whose practice is parallel to the discipline of psychiatry. Professional caregivers are independent formal and informal learners who are subject to a continuous learning process. In this, professional caregivers attempt to expand their knowledge and keep their skills up to date. Inevitably, the practice of caregiving is continuously subject to ethical decisions. It is grounded in the interaction with others. Ethical theories, therefore, is one of the tools that support ethical decisions. In particular, they suggest different approaches according to contexts and peculiar, difficult circumstances. This framework, which is provided by ethical theories, is underpinned by some fundamental principles such as to prioritise people, to guarantee safety, to foster professionalism trust (Smith, 2017). However, ethical decision-making is not only limited to the adoption of ethical theories, although it is a direct consequence of a person's psychosocial and professional development (Smith, 2017; Corley, 2005).

Consequently, an ethical approach to caregiving starts from a rounded, or a most complete as possible comprehension of patients' situations. Professional caregivers must be able to gather values and facts around patients such as family history, staff observations, etc. (Smith, 2017; Smith, 2002). These must be translated into learning according to the notion of lifelong experience. Any taken decision, therefore, would be fully justified and strengthened by proper evidence. While the ethical side of a decision is often hidden, this help in considering it. It counterbalances a vertical and hierarchical approach to professional caregiving, which was peculiar to the past. Acting and critical reflections on actions are central to a more democratic attitude towards caregiving (Smith, 2017; Gallagher, 2004). Additionally, professional caregivers' decisions might have an emotional implication on older adults' patients. Professional caregivers, thereby, must develop empathic skills (e.g. active listeners, compassionate, accepting an older adult), flexibility, have the capacity of making the right choice at the right time, and use tacit knowledge (Smith, 2017; Gastmans, 2002; Levine, 1977). In this, therapeutic relationships are the core of care models that focus on patients' well-being (Smith, 2017). Consequently, professional caregivers must present excellent communication skills. This would avoid misunderstanding, strength honesty, dignity, politeness, respect and teamwork among peers and service users, and reduce of discriminatory behaviours. The therapeutic relationships, therefore, are a medium of treatment (Smith, 2017; Corley, 2002). Professional caregivers' ethical attitude identifies possible clinical and economic risks while it embraces a little uncertainty. Professional caregivers become an effective decision maker who easily recognises issues, analyses evidence, and thereby they are critical with their ethical reasoning process. This asks professional caregivers for a capability in defining an equilibrium between a leading role and a supporting role that places older adult patients at the centre of the care model. Consequently, professional caregivers embody characteristics of being emotionally and ethically sensitive, which are counterbalanced by more pragmatic ones such as

clinical decision-making, and risks management (Smith, 2017).

Nevertheless, a robust legal framework regulates both professions and their ethics. The National Council of Architectural Registration Boards adopted a code of conduct, which acted as guidelines for professional codes of national professional organisations such as the American Institute of Architects (AIA) or The Royal Institute of British Architects (RIBA). The code of conduct attempted to define the domains of an ethical architectural profession: "competences, conflict of interest, full disclosure, compliance with the law, and professional conduct" (Wasserman et al., 2000, pp. 113). Consequently, architects and clients are invited to judge and reason their acts and contexts according to both code of conduct, which pledges an ethical approach. For example, the adoption of socially sensible and responsible projects, and thereby the translation of clients' wills to achieve a broader social goal (Wasserman et al., 2000; Ray, 2005). In the same vein, the legal framework in professional caregiving is the Nurses and Midwives code of conduct (NMC). It informs two different levels of the profession: the operational and the strategic levels. The 2005 Mental Act had substantially affected it. The NMC aims to control patients' behaviours. In the United Kingdom, older adults with mental impairments fall in the category of a vulnerable group of people, and thereby they are subject to a broader spectrum of risks than other groups of older adults. Inevitably, the attention towards risk control is emphasised. To conclude, the code of practice suggests what a nurse can or cannot do in clinical settings. In this, it informs professional caregivers' actions through the provision of a methodological and legal framework for the reasoning and judgments of these actions. They are based on evidence. Decisions, therefore, are rarely taken individually, although they are discussed with others (Smith, 2017). The architectural and caregiving legal frameworks imply professional sanctions in case of misbehaves (Wasserman et al., 2000; Smith, 2017).

However, it was hypothesised that the open type has ethical implications on both

professionals and inhabitants. In a certain sense, it extends some aspects of professional codes of conduct and critical ethical reasoning and acting to the notion of inhabitation. The Aristotelian ethics helps in doing this (Curzer, 2012; Smith, 2017). The Dutch case study, for example, is a nursing home, which was designed and built in the 1960s. The architects adopted design principles in line with the modern Dutch movement and its ideologies (Designer Interview, 2017, a). While the architects pragmatically approached ethical questions that concerned with economic and design decisions according to functionalist architectural and aesthetical theories and clients/ contractors meetings (Wasserman et al., 2000), the new socio-economic scenario of the 2000s posed radically different challenges. The cut down of funding for older adults' care by the Dutch Government, together with a new building regulation and a lack of affordable student accommodations forced the Humanitas' © CEO to the development and thereby adoption of a new care model. Consequently, the Humanitas© was refurbished with the few economic resources available and university students were welcomed (Manager Interview, 2017, a). Besides more substantial changes of the physical settings, a collaboration between the professional caregivers and residents has defined the design of interior spaces through time (i.e. furniture, the colours, material, etc.) (Professional Caregiver Interview, 2017, a) - Figure 151.

Similarly, the Rudolf© Senior Home was a housing complex designed and completed in the 1970s. It was turned into a Senior Home only in the 1990s. Over time, the Rudolf©'s spatial and aesthetical functional values were subject to a few refurbishments according to continuously changing economic and demographic settings of the Finnish context and its dimensional requirements (Manager Interview, 2018). However, the increasing rate of youth homelessness and older adults' loneliness, which have come along with a social stigma towards these two age groups, fostered the Helsinki City Youth Department in the adoption of innovative housing solutions. While the Rudolf© did not undergo any refurbishment to accommodate young adults residents, a partnership

Figure 151. The Humanitas' Collage. It Outlines the Relationship Between
the Case Study, Different Age Groups, and the Landscape © Davide Landi

between residents and professional staff (e.g. professional caregivers, occupational therapists, etc.) characterised the design of interior spaces with work of arts craft (e.g. paintings, knitting, etc.); and second-hand furniture after its inhabitation (Professional Caregiver Interview, 2018) - Figure 152.

If we now turn to the Gojikara Mura©, the Japanese case was built in 1981. The construction of other facilities followed the completion of the Children's Day Care. Its incremental development that showed a special sensibility towards the existing natural environment that was possible only through the peculiar relationship between the Gojikara Mura© founder member and the architect. For example, the architect lived in the area for six years while working on the design (Designer Interview, 2017, b). The architect, therefore, could develop a unique understanding of social and environmental pre-existences and thereby translate them into a work of architecture. It has been a resilient work of architecture that confirmed its adaptability to the site, and of its occupants. Residents, for instance, are also engaged in maintenance activities of different buildings over time. This strengthens the collective sense and in which participation is fundamental (Professional Caregiver Interview, 2017, b). Clear is the ethical implications on the design process and its figures such as the architect, the clients and occupants. The three cases ask for their emancipation to comprehend social, political and economic contexts. In this, these figures accomplish their social responsibility beyond conventional professional and societal domains (Wasserman et al., 2000). There are no established hierarchies while these figures' collaborative and participatory contribution in the adaptation process of the case studies crystallises a renewed and more contemporary ethics – design paradigm (Sennett, 2018) - Figure 153.

Furthermore, the Gojikara Mura©, the Rudolf©, and the Humanitas© open up standard older adults long-term care models to engage in care provision diverse

Figure 152. The Rudolf' Collage. It Outlines the Relationship Between the Case Study, Different Age Groups, and the Landscape © Davide Landi
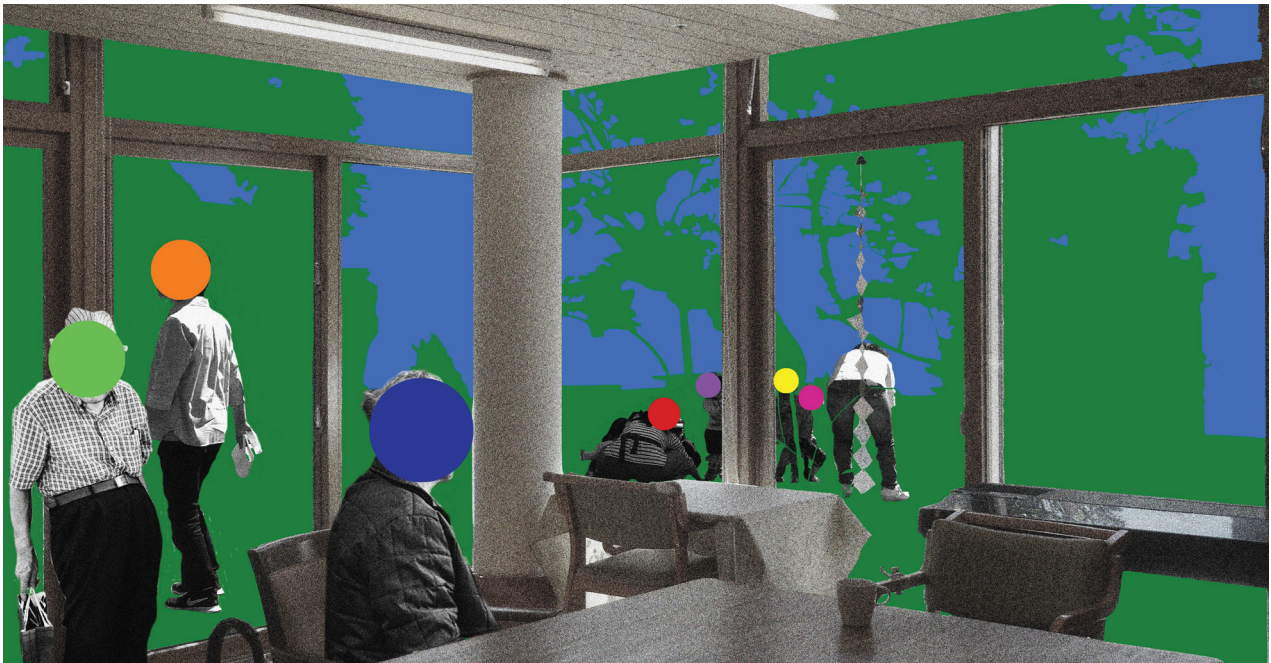
Figure 153. The Gojikara Mura's Collage. It Outlines the Relationship Between the Case Study, Different Age Groups, and the Landscape © Davide Landi

groups of professional and informal care providers such as volunteers, community/ social workers and, young-adult residents. In this, they are invited to contribute and collaborate (WHO, 2012) informally. The Gojikara Mura©, for example, embodies a care model in which nursing students, professional nurses, animals, the forests and community members such as mothers of the kindergarten children contribute directly or indirectly to the care provision. Older adults help with the local restaurant's catering activities, gardening and maintenance of the existing facilities (Resident Interview, 2017, b); while younger community members consistently have informal conversations with older adult residents while children can play with them (Anderzhon et al., 2012; Resident Interview, 2017, b). The Humanitas© instead is underpinned by informal interactions between young and older adults residents such as preparing meals, doing shopping together, teaching the use of technology, etc. Young residents, therefore, have free accommodation (Manager Interview, 2017, a). Over time, this has expanded the number of volunteers who include university students as well as Deventer citizens. Students who live in the nursing home must attend a course in first aid, fire security and other panic situations (Professional Caregiver Interview, 2017, a). Similarly, the Rudolf© senior home has a robust relational pattern between young adult and older residents such as baking cakes, drawing, painting, reading newspaper and books, going to concerts and having parties together (Resident Interview, 2018). Even if it has a more formal nature compared to the one in the Netherlands (i.e. the manager asks young residents to sign an official contract, which states the core rules of the housing solution), young adult' residents do not attend any first aid, fire security or training course before moving in (Professional Caregiver Interview, 2018). Nevertheless, young adult residents do not have medical and treatment responsibilities in all of all the three case studies. They represent just as additional informal layer that defines a new paradigm of care. Therefore, professional caregivers are still crucial for sharing their expertise.

Inevitably, this may imply an additional effort and expenditure of physical and

psychological resources for professional caregivers. However, a common view amongst interviewees from the Gojikara Mura© was that the adoption of this care model and involvement of different figures in the care provision is simultaneously satisfying although tiring (Professional Caregiver Interview, 2017, b). Interviews from the Humanitas© and the Rudolf©, neverthless, confirmed that the presence of volunteers and other age groups living in the two facilities have a positive impact on the wellbeing on caregivers and older adults.

However, the multidisciplinary way of working which is embedded in these care paradigms might introduce some challenges. They concern both economic and clinical risks management (Anderzhon et al., 2012; Manager Interview, 2017, a). The episodes at the Humanitas© of a student-resident who calmed down an old-resident who was threatening a professional caregiver, or a student who led a wandering old woman back to her room after a glass of wine are examples in which young residents and volunteers take simple clinical decisions (Turner, 2016; TEDex, 2016; Resident Interview, 2017, a). Inevitably, it has direct implications on clinical risks management. The episode at the Rudolf© of two young adult resident who could not effectively contribute to the innovative model, instead, confirms direct implications on economic and social resources management. However, the critical ethical reasoning and acting which has been until now circumscribed to professional caregiving figures are extended to other groups of inhabitants. While young adult residents strengthen their social role as effective decision makers, they embrace emphatic, good communications, team working, and tacit knowledge skills to build meaningful although therapeutic relationships (Smith, 2017; Gastmans, 2002; Levine, 1977; Ray, 2005). In this, volunteers and young residents learn how to become responsible with an immense social return on them. Consequently, ethics and being ethical is not limited to professional bodies that gather back some of the ethics which have been eroded (Ray, 2005), while it is concerned with the notion of inhabitation and being inhabitants or

citizens respectively of a work of architecture or a city. Clear, therefore, are the parallels with the Aristotelian ethics. In particular, Aristotele distilled the virtue of friendliness and the importance of its network from the notion of membership in a Polis. The term refers to the concept of the city in Classical time as not only an ensemble of stones but at first instance as a human settlement. Friendliness, therefore, differs from the friendship because a certain sentimental detachment between different members is implied. This would support constructive criticism and oppositions. Therefore, Aristotle considered friendliness central in the decision-making process rather than intimate relationships. Friendliness, therefore, requires equal distributions of duties and justice among members. In this, members would achieve a common good (Curzer, 2012). David Harvey (2009) analyses this dualism at urban scale in the book *Social Justice and the City.* The author, for example, argues how the "right to the city" (Harvey 2009, pp. 315) is not individualistic freedom, while it represents the possibility by the built environment in generating growth and displacements in its occupants and vice versa. In particular, this is a right about collective and social justice, which only in part and a little include individual justice (Brenner et al. 2012). The common aspects, aspirations shared by the majority of the people should be translated into the built environment.

Over time, the different economic models have produced a compartmentalised diversification of the built environment. The expansion of the industrial society and the establishment of the capitalist model after exacerbated the interest of inhabitants into the economy of a city and the possibility of accessing to it (Jacobs, 1969; Geddes, 1915). People, therefore, did not dwell in the city any more (Sennett, 1994). The recent advent of new political ideologies and the availability of new technologies have emphasised the marginalisation of the Aristotelian notion of inhabitation. While they have informed people's needs and individualistic and hedonistic identities (Mostafavi, 2017), Sennett (2018) wisely questions the role of the contemporary built environment in his latest book *Building and Dwelling: Ethics of the City.* The author, therefore,

through his arguments investigates if the built environment should represent a divided society which is not able anymore to communicate or to promote changes.

In this quest for an alternate version of ethics, the book *The Ethics of the Urban* (Mostafavi, 2017) acknowledges the necessity for the distillation of new kind of ethics that bind the social and the physical dimension of our contemporaneity. The publication attempts to do this through a collection of essays. They approach the paradigm ethics-built environment from different facets and through different projects and scales (Mostafavi, 2017), and from the overall city/built environment to a particular place (Sennett, 2018). Therefore, a dialogue between the social and the physical dimension is possibly revealed. Mostafavi (2017) described it as an embedded mechanism in the act of occupation of space by human beings. However, ethics were framed at two different levels: declarative and the active level. The professionals' codes of conduct are the declarative level; while the active level concerns every day, which has been negatively affected. The contemporary socio-economic matrix that considers an ageing population and an increasing dementia rate confirm the immediate necessity in opening the ethical dialogue to a broader audience. Historically, the built environment both at the architectural and urban scale has been the container which has digested these challenges and transformed them into the "civic" again (Mostafavi, 2017, pp. 35). Consequently, inclusive urban and architectural settings have been the stage on which people with different ethnical, economic, demographic, and social backgrounds could bridge together. These have been active elements, major basins for the production and circulation of values underpinned by diversity as well as their consumption. Inclusive urban and architectural settings could provide the spatial condition and governance that supported the Aristotelian notion of inhabitation. An inclusive built environment, therefore, is the place in which this union and its enjoyment is possible. Lefebvre's theory on the production of space, which considers it as consequence of the "material production, knowledge production, and production of meaning," becomes a fact (Brenner et al. 2012, pp. 52; Lefebvre, 1992).   In this, not only a new "civic"

is generated, but it improves what is already existing (Mostafavi, 2017). Therefore, this diversity claims for architectural and urban stages to access these values, and thereby alternate ways of their consumption (Brenner et al. 2012). This is achieved only through alternate ethics at the active level. It is interesting to note that in all three cases of this study, however, the analysis revealed that the link between care models, living experiences and the architectural frames are strongly underpinned by the Aristotelian notion of friendliness and thereby fall in this discourse of the necessity alternate ethics.

The open type as "heterotopia," therefore, emphasises the value of the common. In this, it rejects passive architectural and urban settings while embraces active ones. They accommodate alternate experiences far from well-known experiences, which are peculiar, in this study, to older adults' long-term care facilities. Consequently, differences and displacements are synonymous of growth and the creation of an inclusive identity (Mostafavi, 2017). These alternate ethics encourages complex and propositional synergies. Inhabitants, therefore, would be free from the risks of prescriptive environments (Sennett, 2018). In this, the open type does not simply tear down the wall between different socio and age groups, although it also fosters a sociological work between the diverse inhabitants. This sociological work is neither rooted in the conciseness of the others, nor in the unification and simplification of the diverse, which instead generates misunderstandings (Sennett, 2018). The architects, professional caregivers, and inhabitants are equally central figures in this social work by producing the richness instead of the efficiency of the relationships. However, it is important to acknowledge the necessity of members/inhabitants' education to ethics, its duties and justice to properly accomplish the virtue. If Dewey framed this education as "moral imagination" (Fesmire, 2003), Aristotle defined it as practical wisdom. It is "the knowledge of which acts are right" (Curzer, 2012, pp. 293). Only then, ethics and being ethical means being human. Consequently, the open type not only proposes an alternate way of conceiving ethics beyond professions, but it also appeals to the

necessity of a renewed education of inhabitants of a work of architecture and thereby of a city. This is a new ethic, the ethics of the open type.

To conclude, these findings raise intriguing questions regarding the nature and extent of the notion of types: the open type. They also illustrate some of the ethnographical and cultural notions as well as historical precedents such as the Japanese notion of "MURA" and the Geel model. This international comparison of three case studies attempted to distillate the principles for architectural types in contemporary culture. They overlap with the "open system" theory: to accommodate a "passage of territories," to develop narratives, to have "incomplete forms," and thereby to generate "democratic spaces." In this, the Gojikara Mura©, the Rudolf©, and the Humanitas© do not adopt many of the more recent age and dementia-friendly design standards. Nevertheless, they not only welcome alternate groups of mind to a participatory contribution to their thinking, making and thereby living but they also inform settings in which a distinct mode of thinking, making, and living is performed. Consequently, the open type behaves as "heterotopia" (Hetherington 1997, Franck and Stevens 2007). The open type is a spatial frame that accommodates a socially inclusive, collaborative and multi-disciplinary order. It is an alternate social space far from conventionally homogenising and fragmentising architectural designs. In this particular study, the three cases exemplify alternate older adults' long-term care facilities, which usually embrace efficiency and hierarchical decision-making approaches. They, however, propose a multi-disciplinary paradigm of care beyond more conventional care models. Alternate age and social groups participate in informal and formal care provision of older adults' residents. From their part, older adults with early stages of dementia become active subjects rather than passive objects of the multi-disciplinary paradigm of care. It, therefore, nurtures social inclusiveness and destigmatisation of older adults as a social and economic burden. This has had positive repercussions on occupants' well-being and economies, and their architectural frames. They have produced forms of architecture not yet consistently

present in Western countries. These forms of architecture, however, unveil design principles that respond to the typological problem in contemporary culture. In this, the open type as "heterotopia" clearly translate the value of the common. It suggests a different attitude towards ethics. They concern with the notion of inhabitation, and thereby the ethics of the open type reclaim Aristotelian investigations on the theme beyond the ethics of professional bodies. However, this implies a certain kind of re-sponsibilities for inhabitants who may require education to ethics, its duties and justice. To this end, the open type may inform future care and design practices the must be politically and economically supported by institutions and governments.

Nevertheless, there are still many unanswered questions. Whilst this thesis provides a piece of architectural theory with practical repercussions, it should not be considered as a neatly wrapped package. It instead is an "open-ended methodology" that is continuously applicable (Eisenman, 1963, pp. 353). Further work, therefore, is required to establish a more comprehensive viability of the open type. The notion of open types aims to frame a general design principle. This notion, however, is distilled within a limited and specific research domain – ageing population, dementia and long-term care architectures. I would suggest to move on to ask how lessons from current social inclusive strategies and their architectural correlate informed by different contemporary cultures can enable people's social well-being beyond the ageing population and dementia subject.

REFERENCE LIST

Abu-Ghazzeh, T. M. (1999) Housing Layout, Social Interaction, and the Place of Contact in Abu-Nuseir, Jordan. *Journal of Environmental Psychology* [online] 19 (1), pp. 41-73. DOI: https://doi.org/10.1006/jevp.1998.0106. [Accessed: 13th December 2017].

Achterberg W.P., Gambassi G., Finne-Soveri H., Liperoti R., Noro Dinnus, A. Frijters H.M., Cherubini A, Dell'Aquila G, Ribbe M. W. (2010) Pain In European Long-Term Care Facilities: Cross-National Study In Finland, Italy And The Netherlands. *Pain* [online] 148 (1), pp. 70-74. DOI: https://doi.org/10.1016/j.pain.2009.10.008 [Accessed: 12th April 2018].

Alant, E., Geyer, S., and Verde, M. (2015) Developing Emphatic Skills Among Teachers and Learners in High Schools in Tshwane: An Inter-generational Approach involving People with Dementia. *Perspectives in Education* [online] 33 (3), pp. 141-158. Available at:https://www.questia.com/library/journal/1P3-4320939829/developing-empathe-tic-skills-among-teachers-and-learners [Accessed: 16th February 2020].

Alexander, C. (1973) *Notes on the Synthesis of Form.* Cambridge (MA): Harvard University Press.

Anderzhon, J. W., Hughes, D., Judd, S., Kiyota, E., Wijnties, M. (2012) *Design For Aging: International Case Studies Of Building And Program.* New Jersey (NJ): John Wiley and Sons.

Ayalon, L. (2015) Perception of Old Age and Ageing in the Continuing Care Retirement Community. *International Psychogeriatrics* [online] 27 (4), pp. 611-620. DOI: https://doi.org/10.1017/S1041610214002415 [Accessed: 13th December 2017].

Ayres, L. (2000) Narratives Of Family Caregiving: Four Story Types. *Research in Nursing & Health* [online] 23 (5), pp. 359-371. DOI: 10.1002/1098-240X(200010)23.

Barnes, S. (2002) The Design Of Caring Environments And The Quality Of Life Of Older People. *Ageing & Society* [online] 22, pp. 775–789. DOI: 10.1017/S0144686X02008899. [Accessed: 8th September 2016].

Berke E.M., Gottlieb, L.M., Moudon, A.V., and Larson, E.B. (2007) Protective Association Between Neighborhood Walkability And Depression In Older Men. *Journal of the American Geriatrics Society* [online] 55(4), pp. 526-533. DOI: 10.1111/j.1532-5415.2007.01108.x [Accessed: 7th December 2017].

Berkman, L.F., and Kawachi, I. (eds.) (2003) *Neighbourhoods and Health.* Oxford (UK): Oxford University Press.

Berkman, L.F., Kawachi, I. and Glymour, M.M. (eds.) (2014) *Social Epidemiology*. Oxford: Oxford University Press.

Best, R., and Porteus, J. (2012) *Housing Our Ageing Population: Plan For Implementation.* London: All party Parliamentary Group on Hosing and Care for Older People.

Blackman, T., Mitchell, L., Burton, E., Jenks, M., Parsons, M., Raman, S. and Williams, K. (2003) The Accessibility Of Public Spaces For People With Dementia: A New Priority For The 'Open City.' *Disability & Society* [online] 18(3). DOI: http://dx.doi.org/10.1080/0968759032000052914 [Accessed: 17th July 2017].

Borasi, G., and Zardini, M. (eds.) (2012) *Imperfect Health: The Medicalisation Of*

Architecture. Zurich: Lars Muller Publishers.

Brawley, E. C. (2001) Environmental Design For Alzheimer's Disease: A Quality Of Life Issue. *Aging & Mental Health* [online] 5, pp. 78-83 DOI: 10.1080/13607860120044846. [Accessed: 5th May 2017].

Brenner, N., Marcouse, P., and Mayer, M. (eds.) (2012) *Cities For People Not For Profit.* London: Routledge.

Brown, S., C., Craig, M., A., Lombard, J. L., Martinez, F., Plater-Zyberk, E., Spokane, A. R., Frederick, N. L., Pantin, H., and Szapocznik, J. (2009) The Relationship of Built Environment to Perceived Social Support and Psychological Distress in Hispanic Elders: The Role of "Eyes on the Street." *The Journals of Gerontology* [online], series B, 64B (2), pp. 234–246. DOI: https://doi.org/10.1093/geronb/gbn011 [Accessed: 7th December 2017].

Brown, W. C. (2009) Developing Community in Care Homes Through a Relationship-Centred Approach. *Health and Social Care in the Community* [online] 17(2), pp. 177–186. DOI: 10.1111/j.1365-2524.2008.00815.x. . [Accessed: 7th December 2017].

Brownie, S. and Nancarrow, S. (2013) Effects of Person-Centered Care on Residents and Staff in Aged-Care Facilities: a Systematic Review. *Clinical Interventions in Aging* [online] 8, pp. 1-10. DOI: https://doi.org/10.2147/CIA.S38589. [Accessed: 7th December 2017].

CityLab (2015) *This Helsinki Suburb Is Offering Millennials Cheap Rent to Live in a Senior Center* [online]. Available at: https://www.citylab.com/equity/2015/12/helsinki-laajasalo-millennials-senior-home-studio-rent/418134/ [Accessed: 12 April 2018].

Cohen, S. (2004) Social Relationships And Health. *American Phycologist* [online] 59(8), pp.676-684. Doi: 10.1037/0003-066X.59.8.676. [Accessed: 11th November 2017].

Cohen, S., and Wills, T. (1985). Stress, Social Support, and the Buffering Hypothesis. *Psychological Bulletin* [online], 98, pp. 310-357. DOI: 10.1037/0033-2909.98.2.310. [Accessed: 13th December2017].

Collier, J. (2006) The Art of Moral Imagination: Ethics in the Practice of Architecture. *Journal of Business Ethics* [online] 66, pp .307-317. DOI: 10.1007/S10551-005-5600-4. [Accessed: 15th December2017].

Corley, M. (2005) Nurse Moral Distress and Ethical Work Environment. *Nursing Ethics* [online] 12(4), pp. 381. DOI: 10.1191/0969733005ne809oa [Accessed: 18th April 2018].

Corley, M. (2002) Nurse Moral Distress: A Proposed Theory and Research Agenda. *Nursing Ethics* [online] 9(6), pp. 636. DOI: 10.1191/0969733002ne557oa [Accessed: 18th April 2018].

Cornman, J. C., Goldman, N., Glei, D. A., Maxine, W. and, Ming-Cheng, Chang (2003). Social Ties and Perceived Support. *Journal of Aging and Health* [online] 15, pp. 616-644. DOI: 10.1177/0898264303256215 [Accessed: 18th April 2018].

Croinin-Golomb, A. (2014) *Visuospatial Function an Alzheimer's Disease and Related Disorder. The Handbook of Alzheimer's Disease and Other Dementias.* London: Blackwell Publishing Ltd.

Curtis, L., and Netten, A. (2017) *Unit Costs Of Health And Social Care.* Canterbury: PSSRU, University of Kent.

Curzer, H., J. (2012) *Aristotle and the Virtues.* Oxford: Oxford University Press.

Day, K., Daisy, C. and Stump, C. (2000) The Therapeutic Design of Environments for People With Dementia: A Review of the Empirical Research. *The Gerontologist*, [online] 40 (4), pp. 397–416. DOI: https://doi.org/10.1093/geront/40.4.397. [Accessed: 8th June 2016]. De Certeau, M. (1984). *The Practice of Everyday Life.* Berkeley (CA): University of California Press.

De Jong, I. and Jackson, C. (2001) An Evaluation Approach For A New Paradigm - Health Care Integration. *Journal of Evaluation in Clinical Practice* [online] 7 (1), pp. 71-79. DOI:10.1046/j.1365-2753.2001.00285.x [Accessed: 8th June 2016].

Delhanty, T. (2013) *Landscape Design for Dementia Care.* London: Housing LIN, Factsheet 35.

Del Re, P. (2017) Nella Casa di Riposo che Cura gli Anziani Ospitando i Ragazzi. *La Repubblica*, 11th January 2017, p.17.

Dementia Services Development Centre (2009) *Dementia Design Audit Tool.* Stirling: University of Stirling.

Department of Health (DH) (2011) *Innovation Health and Wealth, Accelerating the Adoption and Diffusion in the NHS.* London: Department of Health.

Design Stories from Helsinki (2015) *Tackling Youth Homelessness with Design Experiments: A Home That Fits* [online]. Available at: https://www.muotoilutarinat.fi/en/project/a-home-that-fits/. [Accessed: 12th April 2018].

Designer (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Designer (2017, b) *Interview* with Davide Landi. Nagakute (Japan). 29th September 2017.

Designer (2018) *Interview* with Davide Landi. Helsinki (Finland), 23rd June 2018.

Dewar, B. and Nolan, M. (2013) Caring about Caring: Developing a Model to Implement Compassionate Relationship Centred Care in an older People Care Setting. *International Journal of Nursing Studies* [online] 50 (9), pp. 1247-1258. DOI: https://doi.org/10.1016/j.ijnurstu.2013.01.008. [Accessed: 12th April 2018].

Eisenman, P. (1963) *The Formal Basis of Modern Architecture.* Ph. D. Thesis, University of Cambridge.

European Union (ed.) (2015) *The 2015 Ageing Report. Economic and Budgetary Projections for the 27 EU Member States (2010-2060).* Brussels: European Commission.

Evans, G. W. (2003) The Built Environment And Mental Health. *Journal of Urban Health,* [online] 80 (4), pp. 536–555. DOI: 10.1093/jurban/jtg063. [Accessed: 12th April 2018].

Fang, M. L., Woolrych, R., Sixsmith, J., Canham, S., Battersby, L., Sixsmith, A. (2016) Place-Making with Older Persons: Establishing Sense-Of-Place through Participatory Community Mapping Workshops. *Social Science & Medicine* [online] 168, pp. 223-229. DOI: https://doi.org/10.1016/j.socscimed.2016.07.007. [Accessed: 12th April 2018].

Feddersen, E., and Ludtke. I. (eds.) (2014) *Lost in Space: Architecture and Dementia.* Basel: Birkhauser GmbH.

Fesmire, S. (2003) *John Dewey and Moral Imagination. Pragmatism in Ethics.* Indianapolis (IN): Indiana University Press.

Forbes, J. (2002) The Application Of Age-Integrated Cohousing For Older People. *The Winston Churchill Memorial Trust Of Australia* [online]. Available at: https://www.churchilltrust.com.au/media/fellows/Forbes_Jan_2002-1.pdf [Accessed: 15th February 2017].

Foucault, M. (1984) Of Other Space: Utopia and Heterotopias. *Architecture/Mouvement/Continuite'* [online] 5, pp. 46-49. Available at: http://foucault.info/documents/heterotopia/foucault.heterotopia.en.html [Accessed: 15th February 2017].

Franck, K.A., and Stevens, Q. (eds.) (2007) *Loose Space. Possibility and Diversity in Urban Life.* London: Routledge.

Fukutake, T. (1989) *Japanese Social Structure: Its Evolution In The Modern Century.* Tokyo: University of Tokyo Press.

Gallagher, A. (2004). Dignity and Respect for Dignity - Two Key Health Professional Values: Implications for Nursing Practice. *Nursing Ethics* [online] 11(6), pp. 587. DOI: 10.1191/0969733004ne744oa. [Accessed: 18th April 2018].

Gastmans, C. (2002). A Fundamental Ethical Approach to Nursing: Some Proposals for Ethics Education. *Nursing Ethics* [online] 9(5), pp. 494. DOI: 10.1191/0969733002ne539oa [Accessed: 18th April 2018].

Gaudion, K., and McGinley, C. (2016) *Design For The Mind.* The Helen Hamlyn Centre for Design and British Standards Institute (BSI) [online] Available at: http://extensis.rca.

ac.uk:8085/helen_hamlyn_centre_for_design_archive/#/ [Accessed: 23rd April 2018].

Geddes, P. (1915) *Cities In Evolution: An Introduction To The Town Planning Movement And To The Study Of Civics.* London: Williams & Norgate.

Glass, A. P. (2009) Aging in a Community of Mutual Support: The Emergence of an Elder Intentional Cohousing Community in the United States. *Journal of Housing For the Elderly* [online] 23 (4), pp. 283-303, DOI: https://doi.org/10.1080/02763890903326970. [Accessed: 7th July 2017].

GSD Harvard (2016) *Richard Sennett: The Open City* [online video] Available at: https://youtu.be/eEx1apBAS9A [Accessed: 1st May 2017].

GSD Harvard (2016) *Richard Sennett: Interiors and Interiority* [online video] Available at: https://youtu.be/hVPjQhfJfKo [Accessed: 11th May 2017].

GSD Harvard (2017) *Richard Sennett: The Open City* [online video] Available at: https://www.youtube.com/watch?v=7PoRrVqJ-FQ [Accessed: 1st November 2017].

Guersenzvaig, A. (2018) *Design and Ethics*. ELISAVA – Barcelona School of Design and Engineering. Barcelona, 7th March 2018.

Illies, C. and Ray, N. (2014) *Philosophy of Architecture.* Cambridge: Cambridge Architectural Press.

Hagestad, G. O., and Uhlenberg, P. (2005) The Social Separation of Old and Young: A Root of Ageism. *Journal of Social Issues* [online] 61 (2), pp. 343-360. DOI: https://doi.org/10.1111/j.1540-4560.2005.00409.x. [Accessed: 7th July 2017].

Hall. E.T. (1969) *The Hidden Dimension.* New York (NY): Anchor Books Edition.

Hall. E.T. (1959) *The Silent Language.* New York (NY): Doubleday and Company.

Hanson, J. (2001) Morphology And Design: Reconciling Intellect, Intuition, And Ethics In The Reflective Practice Of Architecture. *Proceedings of the 3rd International Space Syntax Symposium.* [online] Atlanta (GA) 7-11 May 2001, 06, pp.1-18. Available at: http://discovery.ucl.ac.uk/1024/1/hanson-2001-morph.pdf. [Accessed: 7th July 2017].

Harries, K. (1997) *The Ethical Function of Architecture.* Cambridge (MA): MIT Press.

Harvey, D. (1996) *Justice, Nature, and the Geography of Differences.* Cambridge: Blackwell.

Harvey, D. (2002) *Spaces of Hopes.* Edinburgh: University of Edinburgh Press.

Harvey, D., and Herod, A. (2009) *Social Justice and the City.* Athens (GA): University of Georgia Press.

Healthcare Design and Management (2014) *Dementia Care, A Five Points Approach To Design Dementia Environments* [online]. Available at: http://www.healthcaredm.co.uk/show-article.asp?articleid=95. [Accessed: 10th November 2016].

Heidegger, M. (1993) Building, Dwelling, Thinking. In: Krell, D. (ed.) *Basic Writings*. London: Routledge, pp. 239-256.

Heidegger, M. (2010) *Being and Time.* Albany (NY): State of New York University Press.

Hetherington, K. (1997) *The Badlands of Modernity: Heterotopia and Social Ordering*. London: Routledge.

Highnett, S., Otter, M. E., and Keen, C. (2016) Safety Risks Associated With Physical Interactions Between Patients And Caregivers During Treatment And Care Delivery In Home Care Settings: A Systematic Review. *International Journal of Nursing Studies* [online] 59, pp. 1-14. DOI: http://dx.doi.org/10.1016/j.ijnurstu.2016.02.011 [Accessed: 26th April 2016].

Hisano, S., Motoki A., and McGreevy, S. R. (2018) Revitalizing Rurality under the Neoliberal Transformation of Agriculture: Experiences of Re-agrarianisation in Japan. *Journal of Rural Studies* [online] 61, pp. 290–301. Doi: https://doi.org/10.1016/j.jrurstud.2018.01.013 [Accessed: 26th April 2018].

Hoglund, J.D., and Ledewitz, S.D. (1999) Designing To Meet The People With Alzheimer's Disease. In: Schwartz, B. and Brent R. (eds.) *Ageing, Autonomy, and Architecture: Advances in Assisted Living.* Baltimore (MD): Johns Hopkins University Press, pp. 229-261.

Hopflinger, F. (2008) A Second Half Of Life: A Period In Transformation. In: Huber, A. (ed.) *New Approaches to Housing for the Second Half of Life (Living Concepts)*. Basel: Birkhauser GmbH, pp. 31-46.

House, J. S., Landis, K., and Umberson, D. (1988). Social Relationships and Health. *Science* [online], pp. 540-545. Doi: 10.1126/science.3399889. [Accessed: 5th December 2017].

Iwarsonn, S., and Stahl, A. (2003) Accessibility, Usability and Universal Design—Positioning and Definition of Concepts Describing Person-Environment Relationships. *Disability and Rehabilitation* [online], 25 (2), pp. 57-66. DOI: 10.1080/dre.25.2.57.66 [Accessed: 15th May 2017].

Jacobs, J. (1961) *The Death And The Life Of The Great American Cities.* New York (NY): Random House.

Jacobs, J. (1969) *The Economy of Cities.* New York (NY): Random House.

James, I. A., WoodMitchell, A., Waterworth, A.M., MacKenzie, L.E. and Cunningham, J. (2006) Lying To People With Dementia: Developing Ethical Guidelines For Care Settings. *International Journal of Geriatric Psychiatry* [online], 21, pp. 800-801. DOI: 10.1002/gps.1551 [Accessed: 2nd May 2018].

Jang, Y., Haley, W. E., Small, B. J., and Mortimer, J. A. (2002) The Role of Mastery and Social Resources in the Associations Between Disability and Depression in Later Life. *The Gerontologist* [online] 42 (6), pp. 807–813. DOI: http://dx.doi.org/10.1093/geront/42.6.807 [Accessed: 27th November 2017].

Jay, M. (2016) *This Way Madness Lies.* London: Thames and Hudson.

Jay, M. (2014) The Geel Question. *Aeon* [Online], January 2014. Available at: https://aeon.co/essays/geel-where-the-mentally-ill-are-welcomed-home [Accessed: 16th November 2016].

Kawachi, I., and Kennedy, B.P. (1997) Health And Social Cohesion: Why Care About Income Inequality? *British Medical Journal* [Online] 5, 314 (7086), pp.1037-1040. DOI: http://www.jstor.org/stable/25174195 [Accessed: 16th November 2016].

Kang, H. (2012) Correlates of Social Engagement In Nursing Home Residents With Dementia. *Asian Nursing Research* (Korean Soc Nurs Sci) [Online] 6 (2), pp. 75-81. DOI: 10.1016/j.anr.2012.05.006 [Accessed: 16th November 2016].

Kelley, A. S., and Meier, D. E (2010) Palliative Care — A Shifting Paradigm. *The New England Journal of Medicine* [online], 363, pp.781-782. DOI: 10.1056/NEJMe1004139 [Accessed: 16th November 2016].

Kerr, J., Rosenberg, D., and Lawrence, F. (2012) The Role of the Built Environment in Healthy Aging: Community Design, Physical Activity, and Health among Older Adults. *Journal of Planning Literature* [online] 27, pp. 43-60. DOI: 10.1177/0885412211415283 [Accessed: 25th October 2016].

Kontos, P. C. (2005) Embodied Selfhood In Alzheimer's Disease: Rethinking Person-Centred Care. *Dementia* [online] 4(4), pp. 553-570. DOI: https://doi.org/10.1177/1471301205058311 [Accessed: 25th October 2016].

Krause, N., Liang, J., and Yatomi, N. (1989) Satisfaction With Social Support And Depressive Symptoms: A Panel Analysis. *Psychology and Aging* [online], 4(1), pp. 88-97. DOI: http://dx.doi.org/10.1037/0882-7974.4.1.88. [Accessed: 6th December 2017].

Krause, N, and Liang, J. (1993) Stress, Social Support, And Psychological Distress Among The Chinese Elderly. *The Gerontologist,* [online] 48 (6), pp. 282–291. DOI: https://doi.org/10.1093/geronj/48.6.P282 [Accessed: 6th December 2017].

Krause, N. (1995) Negative Interaction and Satisfaction with Social Support Among Older Adults. *The Journals Of Gerontology* [online] Series B, 50, pp. 59-73. DOI: 10.1093/geronb/50B.2.P59 [Accessed: 6th December 2017].

Krause, N. (1996) Neighbourhood Deterioration Add Self–Rated Health In Later Life. *Psychology and Aging* [online] 11(2), pp. 342-352. DOI: 10.1037/0882-7974.11.2.342 [Accessed: 6th December 2017].

Labit, A. and Dubost, N. (2016) Housing And Ageing In France And Germany: The In-tergenerational Solution. *Housing, Care and Support* [online] 19 (2), pp. 45-54, https://doi.org/10.1108/HCS-08-2016-0007. [Accessed: 8th September 8, 2016].

Landi, D. (2017) Towards New Architectural and Urban Typologies: Thinking, Making and Living as a Post Occupancy Evaluation Method. *Conscious Cities Journal* [online] 3. Available at: http://www.ccities.org/towards-new-architectural-urban-typologies-thin-king-making-living-post-occupancy-evaluation-method/. [Accessed: 27th January 2018].

Latour, B. (1991) *We Have Never Been Modern*. Cambridge (MA): Harvard University Press.

Laslett, P. (ed.) (1972) *Household and Family in Past Times.* Cambridge: Cambridge University Press.

Lefebvre, H. (1991) *Critique of Everyday Life: Introduction.* London: Verso.

Lefebvre, H. (1992) *The Production of Space.* New Jersey (NJ): Wiley.

Lefebvre, H. (1996) *Writing on Cities.* Oxford: Blackwell Publishing.

Lefebvre, H. (2003) *The Urban Revolution.* Minneapolis (MN): University of Minnesota Press.

Leng, G. (2012) *On The Pulse: Housing Routes For Better Health Outcomes For Older People*. London: National Housing Federation.

Levine, M.E. (1977) Nursing Ethics and the Ethical Nurse. *American Journal of Nursing*

[online] 77 (5), pp. 845-849. DOI: http://www.jstor.org/stable/3461709. [Accessed: 18th April 2018].

Levy, B. R. (2017) Age-Stereotype Paradox: Opportunity for Social Change. *The Gerontologist* [online] 57 (S2) pp.118-126. DOI: https://doi.org/10.1093/geront/gnx059 [Accessed: 8th September 2018].

Liang, J., Krause, N. M., and Bennett, J. M. (2001). Social Exchange and Well-Being: Is Giving Better Than Receiving? *Psychology and Aging* [online] 16(3), pp. 511-523. DOI: http://dx.doi.org/10.1037/0882-7974.16.3.511. [Accessed: 8th September 8, 2018].

Lillegard, N. (2014) Ethics and Architecture: the Case of Albert Speer. *Journal of Architecture and Urbanism,* [online] 38 (3), 66, pp.192-197, DOI: 10.3846/20297955.2014.9602. [Accessed: 8th September 2018].

Lokon, E., Li, Y. and Kunkel, S. (2018) Allophilia: Increasing College Students' "Liking" of Older Adults with Dementia Through Arts-Based Intergenerational Experiences. *Gerontology and Geriatrics Education,* [online] 10, pp. 1545 -3847. DOI: 10.1080/02701960.2018.1515740 [Accessed: 16th February 2020].

Lubben, J. E. (1988) Assessing Social Networks Among Elderly Populations. *Family & Community Health: The Journal of Health Promotion & Maintenance* [online] 11(3), pp. 42-52. [Accessed: 6th December 2017].

Manager (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Manager (2017, b) *Interview* with Davide Landi. Nagakute (Japan). 29th September 2017.

Manager (2018) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018.

Markus, T. A. (1993) *Building and Power.* London: Routledge.

Massey, D. (2005) *For Space.* Thousand Oaks (CA): Sage.

Myerson, J. (ed.) (2017) *New Old.* London: Design Museum.

McElveen, T. (2015) *Lying To People With Dementia: Treacherous Act Or Beneficial Therapy?* [online]. Available at: https://www.rcpsych.ac.uk/workinpsychiatry/faculties/ oldagepsychiatry/newsletters/enewsletterseptember2015/lyingtopeoplewithdementia. aspx [Accessed: 2nd May 2018].

MetLife (ed.) (2013) *Livable Community Indicators for Sustainable Aging in Place. The MetLife Mature Market Institute.* New York (NY): Stanford Center on Longevity.

Mulligan, M. (ed.) (2008) *Nurturing Dreams.* Cambridge (MA): MIT Press.

Mostafavi, M. (ed.) (2017) *The Ethics Of The Urban: The City And The Space Of The Political.* Zurich: Lars Muller Publishers.
Nakane, C. (1970) *Japanese Society.* Los Angeles (CA): University of California Press.

Newsom, T.J., and, Schulz, R. (1996) Social Support as a Mediator in Relation Between Functional Status and Quality of Life in Older Adults. *Psychology and Aging* [online] 11 pp. 34-44. DOI:10.1037/0882-7974.11.1.34. [Accessed: 6th December 2017].

Nolan, M., Rayan, T., Enderby, P., and Reid, D. (2002) Towards a More Inclusive Vision of Dementia Care Practice and Research. *Dementia* [online] 1(2), pp. 193-211 DOI:

https://doi.org/10.1177/147130120200100206 [Accessed: 11th November 2016].

Peck, E. Towell, D., and Gulliver, P. (2009) The Meanings Of Culture In Health And Social Care: A Case Study Of The Combined Trust In Somerset. *Journal of Inter-professional Care* [online] 15(4), pp. 319-327. DOI: https://doi.org/10.1080/13561820120080454 [Accessed: 11th November 2017].

Pierce, J. (2011) Relational Place-Making: The Networked Politics of Place. *Transactions* [online] 36(1), pp. 54-70. Available: https://www2.clarku.edu/departments/geography/pdfs/Deb%20Martin/2011_Pierce_Martin_Murphy_TIBG.pdf. [Accessed: 11th November 2017].

Professional Caregiver (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Professional Caregiver (2017, b) *Interview* with Davide Landi. Nagakute (Japan), 29th September 2017.

Professional Caregiver (2017) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018.

Ray, N. (ed.) (2005) *Architecture and its Ethical Dilemmas.* London: Routledge.

Resident (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Resident (2017, b) *Interview* with Davide Landi. Nagakute (Japan). 29th September 2017.

Resident (2018) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018.

Rudolf Senior Home (2018) *WELCOME TO RUDOLF SENIORS HOME!* [Accessed: 12 April 2018].

Saarnio, R., Sarvimäki, A., Laukkala, H., Isola, A. (2012) Stress Of Conscience Among Staff Caring For Older Persons In Finland. *Nursing ethics,* [online] 19 (1), pp.104-115. DOI: https://doi.org/10.1177/0969733011410094 [Accessed: 12th April 2018].

Sansom, A. (2017) Scant Evidence Of Health And Social Care Integration Benefits, Report Finds [online] *Salus.* Available at: http://www.salus.global/article-show/scant-evidence-of-health-and-social-care-integration-benefits-report-finds.

Schutz, A (1972) *Phenomenology Of The Social World.* London: Heinemann.

Sennett, R. (1970) *The Use Of Disorder.* New York (NY): W.W.Norton and Company.

Sennett, R. (1993) *The Conscience of the Eye: The Design and Social Life of Cities.* New York (NY): W.W.Norton and Company.

Sennett, R. (2003) *Respect. The Formation of Character in an Age of Inequalities.* London: Penguin Books.

Sennett, R. (2006) The Open City. *LSEcities: London School Of Economic Cities* [online]. 6th November 2006. Available at: https://lsecities.net/media/objects/articles/the-open-city/en-gb/ [Accessed: 3rd May 2017].

Sennett, R. (2008) The Open City. In: Burdett, R. and Sudjic, D. (eds.) *The Endless City.* London (UK): Phaidon, pp. 290-297.

Sennett, R. (2012) *Together. The rituals, Pleasure and Politics of Cooperation.* London (UK): Penguin Books.

Sennett, R. (2017) Edges: Self and City. In: Mostafavi, M. (ed.) *The Ethics of the Urban: the City and the Space of the Political.* Zurich: Lars Muller Publishers, pp. 261-268.

Sennett, R. (2018) *Building and Dwelling. Ethics of the City.* London: Penguin Books.

Shaw, B. A., (2005) Anticipated Support From Neighbours and Physical Functioning During Later Life. *Research on Ageing* [online] 27 (5), pp. 503-525. DOI: https://doi.org/10.1177/0164027505277884. [Accessed: 7th November 2016].

Shirahase, S. (2014) *Social Inequality in Japan.* London: Routledge.

Sloterdijk, P. (1998) *Bubbles: Spheres Volume I.* Los Angeles (CA): Semiotext(e).

Smith, K. (2002) Being a Good Nurse and Doing the Right Thing: a Qualitative Study. *Nursing Ethics* [online] 9 (3), pp. 301. DOI: 10.1191/0969733002ne512oa. [Accessed: 18th April 2018].

Smith, G. (2017) *A Practical Introduction to Mental Health Ethics.* London: Routledge.

Tanizaki, J. (1977) *In Praise of Shadow.* London: Vintage.

Teeri, S., Leino-Kilpi, H., Välimäki, M. (2006) Long-Term Nursing Care Of Elderly People: Identifying Ethically Problematic Experiences Among Patients, Relatives And Nurses In Finland. *Nursing Ethics* [online] 13 (2), pp. 116-129 DOI: https://doi.org/10.1191/0969733006ne830oa. [Accessed: 18th April 2018].

The Guardian (2017) *Why Young People are Renting Rooms in a Helsinki Care Home* [online]. Available at: https://www.theguardian.com/society/2017/jun/21/young-people-renting-rooms-helsinki-care-home [Accessed: 12 April 2018].

The Holding Project (2017) *A Home That Fits - Experimental Housing Approaches* [online] Available at: https://www.theholdingproject.co.uk/single-post/2017/06/15/A-Home-That-Fits---experimental-housing-approaches. [Accessed: 12 April 2018].

Townsend, P. (1981) The Structured Dependency of the Elderly: A Creation of Social Policy in the Twentieth Century. Ageing and Society [online] 1 (1), pp. 5-28. DOI: https://doi.org/10.1017/S0144686X81000020 [Accessed: 1st December 2016].

Traphagan, J.W. (2006) Being a Good Rojin. Senility, Power and Self – Actualization in Japan. In: Lawrence, C., and Leibing, A. (eds.) *Thinking About Dementia: Culture, Loss, and the Anthropology of Senility.* London: Rutgers University Press, pp. 269-287.

TEDex (2016) *Intergenerational Learning: Exchanges Between Young and Old-Jurriën Mentink*. Available at: https://www.youtube.com/watch?v=Pt58fu-TjWc [Accessed: 24th April 2017].

Turner, J. (2016) The Happiest Old People's Home of the World. *The Times,* 10th September 2016, pp.52-53.

Turner, J.F.C. (1972) Housing as A Verb. In: Turner, J. F. C., and Fichter, R. (eds.) *Freedom to Build: Dweller Control of The Housing Process.* New York (NY): Macmillan, pp.148-175.

Utton, D. (2013) *Taking Extra Care With Dementia Friendly Design, Brookside Retirement Living Village.* London: Housing LIN.

Walker, S. (2011) *Gordon Matta-Clark: Art, Architecture, and The Attack On Modernism*. London: I.B. Tauris & Co. Ltd.

Wasserman, B., Sullivan, P. and Palermo, G. (2000) *Ethics and The Practice Of Architecture.* New York (NY): John Wiley and Sons, Inc.

Welzel – Connolly, A. (2014) *A Practical Tool Kit for Carers.* London: Dementia Dialogue.

Whipple, T. (2017) Millions of Pounds are Wasted in Poor Care. *The Times,* 6th February, p. 23.

WilliammumfordUTS (2016) *Dateline Shorts: My 93-year-old Flatmate* [online video] Available at: https://www.youtube.com/watch?v=V7TCatTjjjs [Accessed: 24/04/2017].

World Health Organisation (2012) *Dementia. A Public Health Priority.* London: World Health Organization.

Woods, M. (2005). Nursing Ethics Education: Are We Really Delivering the Good (s)? *Nursing Ethics* [online] 12(1), pp. 5. DOI: 10.1191/0969733005ne754oa [Accessed: 18th April 2018].

Yates, A. (2016) Mauri-Ora: Architecture, Indigeneity, and Immanence Ethics. *Architectural Theory Review* [online] pp. 261-275. DOI: https://doi.org/10.1080/13264 826.2017.1288638 [Accessed: 12 April 2018].

Zimmerman S., Williams C. S., Reed P. S., Boustani M., Preisser J. S., Heck E., Sloane P.D. (2005) Attitudes, Stress, and Satisfaction of Staff Who Care for Residents With Dementia. *The Gerontologist* [on-line] 45 (1), pp. 96-105. DOI: https://doi.org/10.1093/ geront/45.suppl_1.96.

CONCLUSION

Far from prescriptive guidebooks and design guidelines, this study set out to provide a significant contribution to the theoretical discourse on "Open Architecture" (Akcan, 2018). Through a case study approach, the detailed critique addressed the conceptual type of case studies beyond their formal particularistic departures. The study did not explain how the Humanitas© in Deventer (NL), the Gojikara Mura© in Nagakute (JP), and the Rudolf© in Helsinki (FI) work in practice in all of their aspects. The three case studies can, of course, be individually described and investigated as three different structures, yet the Humanitas© in Deventer (NL), the Gojikara Mura© in Nagakute (JP), and the Rudolf© in Helsinki (FI), however, are tied by certain largely common characteristics. Rather than trying to review everything, therefore, my ambition was to map the richness of common patterns linked to the development of the three case studies and their dwelling experiences. In this, the critique distilled the generative principles of the conceptual type of the case studies. It, then, theorised them into the notion of architectural types in contemporary cultures. The original contribution of this study defines them as "open types." They have ethical implications on the Thinking, the Making and, the Living of a work of architecture. By employing the terms Thinking, the Making and, the Living, the study did not only refer to the phases of a design process (Landi, 2017), but it embedded the Heideggerian necessity for a renewed continuity between "Man and Being" and "Build and Dwell" (Heidegger, 1993, pp.345). This is coherent with Harries' (1997) notion of architecture. The author links architecture to "ethos" which names how a human being dwells in the world. Therefore, architecture informs new ways for individual and communal living. For Harries, it is the ethics of architecture in the sense that the word ethics derives from ethos (Harries, 1997). This refers to Aristotle's idea of being a member of a work of architecture or a city (Curzer, 2012). By adopting alternate ethics, open types welcome different groups of mind to a participatory contribution to the thinking, making and thereby living of a work of architecture. In this, they give form to a work of architecture in which an alternate but socially inclusive, collaborative, and multi-disciplinary thinking, making, and living is

performed. Consequently, open types are the architectural tools for the reproduction of a continuously changing contemporary society's articulation and its cultures into works of architecture. By cultures, the study means all contemporaneous unself-conscious agents and challenges (Alexander, 1973). Nevertheless, the unself-conscious agents and challenges for this study are represented by the result of health and socio-economic achievements. Over time, they have determined better healthcare systems, improved economies, a reduction in infant mortality, and a growing number of adults living longer (OECD, 2015). Inevitably, the rate of people with physical and mental impairments such as dementia, their related high dependency services, and expenditures are expected to increase out of control of societal budgets (European Union, 2015).

To do this, the thesis, first, attempted to frame the contemporary complexity in terms of the demographic structure, its socio-economic implications (i.e. ageing population structure, the rising number of older adults with long-term conditions, the spiralling cost of long-term healthcare services and the shrinking household structure) and policies. The thesis then illustrated three case studies in their subjectivity. It was drawn by their own socio-cultural collectively, care paradigm and thereby architectural frame. The first case study was the Humanitas© in Deventer (the Netherlands). It is a 1964 nursing home with a total population of 166 residents. The second case study was the Gojikara Mura© in Nagakute (Japan). It is a 1981 cross-generational community that has accommodated diverse services such as a child day-care, kindergarten, adult day-care, assisted living, nursing school, and nursing home over time. The third case study was the Rudolf© in Helsinki (Finland). It is a 1974 senior home with 124 residents. In this, the Humanitas© in Deventer (NL), the Gojikara Mura© in Nagakute (JP), and the Rudolf© in Helsinki (FI) were analysed empirically and described according to the "Thinking, Making and Living" framework. The research methodology embedded analytical tools of a one – time Post-Occupancy Evaluation (POE) methodology such as the case studies' on-site survey, sequences of photographs, qualitative interviews

and semi-structured questionnaires, and behavioural mappings. Whilst they went through a tailoring process (e.g. older adults with early stages of dementia's stories and answers shaped these analytical tools); post-on-site survey work expanded this empirical analysis. Design tools such as plans, and sections, and the production of further materials such as infographic representations, collages, analytical drawings further strategically unravelled the complexity of the case studies. All of them were consciously divided into three analytical segments to untangle the relationship between care model, living experience and the architectural frame. In addition, there was the description of the three case studies, which was again structured around the three verbs: "Thinking, Making and Living," and this established robust parallels between professional practice and research (Landi, 2017). The resulting section addressed the architectural case studies in collective terms. As a group, it probed that shared themes are best understood in the light of singular conditions, the unique order, and particular intentions of individual works of architecture. While there is a convergence in the challenges posed by the contemporary context, the conceptual approaches and self-adjusting process of the Humanitas, Gojikara Mura, and Rudolf (Alexander, 1973), the three case studies present differences which concern their economy, scale, and sociocultural background. This informed their care models and the architectural frames. Therefore, the divergences among the Humanitas, Gojikara Mura and Rudolf revealed their shared themes. They delineated features on what was referred to as "Open Types."

Even if this term was synthesised from the analysis of older adults' long-term care facilities, it did not intend to define a single architectural domain and building form. "Open Types" frame logical principles that are prior to building forms of architecture. They reflect Richard Sennett's theory (2018) on "open system." Whether as a nursing home, senior home or a care village, the open type are formed largely through the "passage of territories" (Sennett, 2018; Sennett, 2017; Sennett, 2008; GSD, 2016 a;

Sennett, 2006; GSD, 2017). The Dutch, the Finnish and Japanese case studies set the preconditions for containing a wide range of services, accommodations, and activities, which are not demographic-specific ones. For example, the Rudolf© accommodates a social enterprise that delivers social support services to Laajasalo's young adult citizens with mental disabilities, a restaurant open to the public, and a gym with no admission costs. The Gojikara Mura©, instead, offers a nursing home, a nursing school, an assisted living unit, a community centre, a kindergarten, a secondary school/vocational school, a children's day-care centre, café/restaurant, and art and craft shop/workshop. The strong presence of the natural environment homogenously binds such a diverse spectrum of facilities. The Humanitas© instead hosts a "research lab" which was started by young residents, an 'entrepreneurs hub' and an interior 'shopping boulevard,' with a library, a hairdresser, a wellness centre, a physiothera-pist, a beautician, a supermarket, and a café/pub. In this, the three case studies do not have entrance gates, reception desks or barriers, while they still generate a secure environment (Professional Caregiver Interview, 2017, a; Professional Caregiver Interview, 2017, b; Professional Caregiver Interview, 2018). Such formats clash with more conventional examples, which employ conflicting and contradictory architectural examples, which determines an "age segregation" to efficiently and profitably provide care services (Simpson, 2015). In a certain sense, the three case studies mark the beginning of a de-medicalisation process of architecture (Borasi and Zardini 2012). They reject prescriptive utopian visions in favour of an embracement of the reality (GSD Harvard, 2016). Consequently, the three case studies represent an alternative that positively affects the concern about the proliferation of a socially and economically fragmented societies, and thereby the future of cities as the result of density, and complexity (Rowe and Koetter,1978; Koolhaas, 1994; Koolhaas, 1995). The Open Type engages directly with the theme of "development of narratives" (Sennett, 2018; Sennett, 2017; Sennett, 2008; GSD, 2016 a; Sennett, 2006; GSD, 2017). This is the result of a consistent spectrum of physical and psychological interactions, which are

not circumscribed to a single age, social or professional group as in conventional older adults' long-term care facilities. The informality, spontaneity and freedom of relationship promote older adults' participation and thereby offer a paradigm of communal living beyond professional care providers' and relational responsibilities (Cohen, and Wills, 1985; Krause, 1996; Krause, 1993; Krause, 1995; Jang et al., 2002). In all the three different case studies, to a large extent, emerges a new paradigm of care as informed by the 2012 World Health Organisation (WHO) report which refers to a collaboration between different categories of care providers, and professionals (WHO, 2012). Consequently, the Humanitas, the Gojikara Mura, and the Rudolf investigated here to reinforce the production of socially inclusive settings which has positive effects on their occupants. On the one hand, older adults' ageing process and functional decline slow down. On the other hand, young adults increase their awareness of old age and responsibilities as members of a work of architecture (Berkman et al., 2014; Berkman et al., 2003; Brown et al. 2009; Cornman et al., 2003; Krause et al., 1989; Liang et al., 2001; Lubben, 1988; Newsom, and Schulz, 1996; Shaw, 2005; Cohen, 2004; Berke et al., 2007; Manager Interview, 2017, a; Manager Interview, 2017, b; Manager Interview, 2018). For example, a student-resident calmed down an old-resident who was threatening a professional caregiver at the Humanitas©. Additionally, older adults pass their life experiences or teach traditional hobbies to the students, while students teach the use of technologies to older adults' residents or cook simple meals to share with them (Resident Interview, 2017, a). Similarly, at the Rudolf©, young adult residents prepare traditional meals and go to music concerts together with their older neighbours (The Guardian, 2017, Resident Interview, 2018), while on a daily basis, mothers who take their children to the Gojikara Mura kindergarten discuss with older residents, and the collaborative growth of vegetables confirm these narratives in the Japanese case (Resident Interviews, 2017, b; Welzel – Connolly, 2014; Anderzhon et al., 2012). This borders – narratives conception of types of architecture is also realised through the "incomplete form" (Sennett, 2018; Sennett, 2017; Sennett, 2008; GSD, 2016 a; Sennett,

2006; GSD, 2017). The conception of open types relies on participatory techniques to the thinking, making and thereby living of a work of architecture also after their occupation. In all of the three case studies investigated, the "incomplete form" does not necessarily operate in the refurbishment or construction phase. While it allowed them to accommodate the wide spectrum of different services open to the surrounding communities, the refurbishment attributed to the Rudolf©, the Gojikara Mura©, and the Humanitas© demonstrates a resilience that fits with the requirements of the new care paradigm. For example, the Humanitas© and the Rudolf© maximised social/ communal areas. The Gojikara Mura© acquisition and adaptation of two farmhouses from the surrounding areas confirm this. In this, they are part of the consolidated urban fabric (Mostafavi, 2017). Nevertheless, the "incomplete form" lies more in the partnership between the Humanitas© and the Rudolf©'s employees and residents that have informed their interior design such as the furniture, the colours, materials, etc., or the Gojikara Mura© residents' engagement with DIY activities (Professional Caregiver Interview, 2017, a; Professional Caregiver Interview, 2017, b; Professional Caregiver Interview, 2018). Additionally, the shipping container in the Humanitas©' vegetable garden that hosts a research lab or the clear incremental development of the Gojikara Mura© which started with a Children's Day-Care in 1981 and was followed by a nursing home, a kindergarten, an assisted living, a community centre, a secondary school coincides with an alternate examples of older adults long-term care facilities. They are not prescriptive environments which propose a "complete lifestyle package" (Simpson, 2015).

The three cases, however, coincide with more genuine needs of dwell. These have risen from unstable and more conventional models to transform the chaos of socio-economic challenges of a new demographic structure "into cosmos" (Harries, 1997). Therefore, new forms of life that occupy new forms of architecture are revealed. They are underpinned by social inclusiveness, which fosters not only an alternative care paradigm but also a potential economic one. For example, the Gojikara Mura©

offers reduced accommodation fees to older residents in an exchange for DIY, and patrol activities, while the Humanitas'© young residents have free accommodation in return of thirty hours per month of social work. Similarly, the Rudolf©'s young residents have affordable rent (€290 per month for a single-room residential unit, while €470 per month for a double-room residential unit) compensates their 3-5 hours per week of social works (Manager Interview, 2017, a; Manager Interview, 2017, b; Manager Interview, 2018). These practices generate "democratic spaces" (Sennett, 2018; Sennett, 2017; Sennett, 2008; GSD, 2016 a; Sennett, 2006; GSD, 2017). It contributes to the emancipation of the older as well as young residents. While it presents parallels with the tendencies that authors such as Simpson (2015) identified, the three analysed formats avoid the risk of escapism from everyday responsibilities. They vary according to different phases of life, although they are usually abandoned with more prescriptive settings. Consequently, the Rudolf, Gojikara Mura and Humanitas propose an alternate organisation of older adults' long-term care facilitates, which are usually structured around efficiency, consistency, and hierarchical decision making (Brownie and Nancarrow 2013; Dewar and Nolan, 2012). It reflects medical rhetoric which is more often applied to our built environment. This has generated specific architectural correlates to tackle everyday problems such as the ones related to an ageing population (Borasi and Zardini 2012).

By being true to phenomena (Illies and Ray, 2014), philosophical theories around the notion of "heterotopia" (Harvey 2002; Hetherington 1997; Lefebvre 2003; Dehaene, and De Cauter, 2008; Foucault 1984) theoretically frames the three cases' "self-adjusting process" (Alexander 1973), informed by economic and sociodemographic challenges, as open types. On the one hand, the adoption of an alternate approach to architecture forces architects to think, make, and live architecture as a medium for the exploration of participatory strategies, and the creation of synergies concerning different domains. It claims for continuity between space functionalist production forces and a social one

(Lefebvre, 1992; Latour 1991; Sloterdijk, 1998). On the other hand, open types do not only imply the use of collaborative and socially inclusive design principles, although they impose a multidisciplinary, collaborative and socially inclusive order among their occupants as a result (Borasi and Zardini 2012; Piškur 2014; WHO 2001; Rosenbaum and Stewart 2004; Cerniauskaite et al. 2011). The open type as "heterotopia" does not indicate the social order, although it is only the stage for alternate social order (Hetherington 1997, Franck and Stevens 2007).

Consequently, the general ambition of this study in defining open types led me to investigate and thereby to comprehend both sociologically and spatially the Rudolf senior home, Gojikara Mura care village and Humanitas nursing home. The three cases evolved over time (Goodsell, 2001). Three main changes synthesise their evolution. The first change was the refurbishment to fulfil the requirements of different building regulations for older adults' care facilities. The second and major change concerned the functional concept of the older adults' care facilities. It attempted to respond to a complex contemporary context, which is becoming less simple all the time. The introduction of alternate care paradigms opened the three cases up to different subjects such as the forest, the animals, mothers of children, students. The third significant change occurred over the occupation of the case studies. They constituted new individual as well as collective forms of building and dwelling. In this particular study, they suggested a new socio-economic equilibrium for the everyday challenges of older adults with early stages of dementia living and their carers.

While the interpretation of behavioural, social and spatial expressions illuminates from different angles the three cases, these perspectives converge on a renewed definition of building types latent in our contemporaneity. They may represent the basis for a new critical architectural theory where practice addresses the work of theorists (Brenner et al., 2012). Open types, therefore, translate mutations of contemporary cultures

and their challenges into architecture. This is only possible through the embodiment into the thinking, the making and living of a work of architecture of the Aristotelian investigations on ethics (Curzer, 2012). According to Harries (1997, pp. 226 and 228):

> Earlier I spoke of architecture as a defence against terror of space and I suggested that such a defence is especially necessary in a culture in danger of losing its sense of place. I now want to add: we are in even greater need of architecture to defend ourselves against the terror of time… Architecture deals with the terror of time first of all by wresting from an unstable uncertain environment a more stable order transforming chaos into cosmos.

At this moment in time in which urbanism and in particular architecture might evolve around alternate principles than before (OEDC, 2012), an "open" typological approach to architecture is not synonymous of economic opportunities, but it is mainly synonymous with collaborations, multiplicity, adaptability and democracy (Akcan, 2018). In this, the international investigation that underpins the thesis embraces the notion of globalisation as a medium to untangle shared patterns (Koolhaas, 1995). This allows architects to adopt design strategies for questioning society nowadays, crossing different categories, and to explore and create synergies (Borasi and Zardini, 2012). They inform innovative orders (i.e. spatial, living, care and economic paradigms) which offer a huge social return. On the other hand, the Western housing market, as in the United Kingdom, mostly targets families or young professionals and many dwellings are left unoccupied. This reveals a general urgency to increase the provision of new housing (Torrington, 2017). The Humanitas©, Gojikara Mura©, Rudolf© and thereby the 'open type' may generate a type of housing stock lacking in Western countries. It is of interest to open-minded people and is a real alternative to the well-known possibilities (Hopflinger, 2008). Consequently, institutions and governments must contribute to the economic and political backing to support these initiatives. There are not political or

social effective changes if there are not changes in the urban environment. An essential bilateral relation is established. This is not just another variation in the exhausted capitalist agenda but it is the right to an effective different world. Therefore, the critical architectural theory becomes a "social act" (Brenner et al., 2012, pp.57) that rejects disciplinary and social division and to satisfy the requirements of narrow functional labels.

REFERENCE LIST

Akcan, E. (2018) *Open Architecture: Migration, Citizenship, and the Urban Renewal of Berlin-Kreuzberg by IBA-1984/87.* Basel: Birkhauser GmbH.

Alexander, C. (1973) *Notes on the Synthesis of Form.* Cambridge (MA): Harvard University Press.

Anderzhon, J. W., Hughes, D., Judd, S., Kiyota, E., Wijnties, M. (2012) *Design for Aging: International Case Studies of Building and Program.* New Jersey (NJ): John Wiley and Sons.

Berke E.M., Gottlieb, L.M., Moudon, A.V., and Larson, E.B. (2007) Protective Association Between Neighbourhood Walkability and Depression in Older men. *Journal of the American Geriatrics Society* [online] 55(4) pp. 526-33. DOI: 10.1111/j.1532-5415.2007.01108.x [Accessed: 7th December 2017].

Berkman, L.F., and Kawachi, I. (eds.) (2003) *Neighbourhoods and Health.* Oxford: Oxford University Press.

Berkman, L.F., Kawachi, I. and Glymour, M.M. (eds.) (2014) *Social Epidemiology.* Oxford: Oxford University Press.

Borasi, G., and Zardini, M. (eds.) (2012) *Imperfect Health: the Medicalisation of Architecture.* Zurich: Lars Muller Publishers.

Brenner, N., Marcouse, P., and Mayer, M. (eds.)(2012) *Cities for People not for Profit.* London: Routledge.

Brown, S, C., Craig, M., A., Lombard, J. L., Martinez, F., Plater-Zyberk, E., Spokane, A. R., Frederick, N. L., Pantin, H., and Szapocznik, J. (2009) The Relationship of Built Environment to Perceived Social Support and Psychological Distress in Hispanic Elders: The Role of "Eyes on the Street." *The Journals of Gerontology* [online] Series B, 64B (2), pp. 234-246. DOI: https://doi.org/10.1093/geronb/gbn011[Accessed: 7th December 2017].

Brownie, S. and Nancarrow, S. (2013) Effects of Person-Centred Care on Residents and Staff in Aged-Care Facilities: a Systematic Review. *Clinical Interventions in Aging* [online] 8, pp. 1-10. DOI: https://doi.org/10.2147/CIA.S38589 [Accessed: 7th December 2017].

Cerniauskaite, M., Quintas R., Boldt, C., Raggi, A., Cieza, A., Bickenbach, J., E., Leonardi, M. (2011) Systematic Literature Review on ICF from 2001 to 2009: Its Use, Implementation and Operationalisation. *Disability and Rehabilitation* [online] 33(4), pp. 281-309. DOI: 10.3109/09638288.2010.529235. [Accessed: 15th February 2017].

Cohen, S., and Wills, T. (1985) Stress, Social Support, and the Buffering Hypothesis. *Psychological Bulletin* [online] 98, pp. 310-357. DOI: 10.1037/0033-2909.98.2.310. [Accessed: 13th December2017].

Cohen, S. (2004) Social Relationships and Health. *American Psychlogist* [online] 59(8) pp. 676-684. DOI: 10.1037/0003-066X.59.8.676. [Accessed: 11th November 2017].

Cornman, J. C., Goldman, N., Glei, D. A., Maxine, W. and, Ming-Cheng, Chang (2003) Social Ties and Perceived Support. *Journal of Aging and Health* [Online] 15, pp. 616-644. DOI: 10.1177/0898264303256215 [Accessed: 7th December 2017].

Curzer, H., J. (2012) *Aristotle and the Virtues.* Oxford: Oxford University Press.

Dehaene, M. and De Cauter, L. (eds.) (2008) *Heterotopia and the City: Public Space in a Post-Civil Society.* Abingdon: Routledge.

Dewar, B. and Nolan, M. (2013) Caring about Caring: Developing a Model to Implement Compassionate Relationship Centred Care in an Older People's Care Setting. *International Journal of Nursing Studies* [on-line] 50 (9), pp: 1247-1258. DOI: https://doi.org/10.1016/j.ijnurstu.2013.01.008. [Accessed: 27th October 2016].

European Union (ed.) (2015) *The 2015 Ageing Report. Economic and Budgetary Projections for the 27 EU Member States* (2010-2060). Brussels: European Commission.

Foucault, M. (1984) Of Other Space: Utopia and Heterotopias. *Architecture/Mouvement/ Continuite'* [on-line] 5, pp. 46-49. Available at: http://foucault.info/documents/ heterotopia/foucault.heterotopia.en.html [Accessed: 15th February 2017].

Franck, K.A., and Stevens, Q. (eds.) (2007) *Loose Space. Possibility and Diversity in Urban Life.* London: Routledge.

Goodsell, C.T. (2001) *The American State House. Interpreting Democracy's Temples.* Lawrance (KS): University Press of Kansas.

GSD Harvard (2016) *Richard Sennett: The Open City* [online video] Available at: https:// youtu.be/eEx1apBAS9A [Accessed: 1st May 2017].

GSD Harvard (2017) *Richard Sennett: The Open City* [online video] Available at: https:// www.youtube.com/watch?v=7PoRrVqJ-FQ [Accessed: 1st November 2017].

Harries, K. (1997) *The Ethical Function of Architecture.* Cambridge (MA): MIT Press.

Harvey, D. (2002) *Spaces of Hopes.* Edinburgh: University of Edinburgh Press.

Heidegger, M. (1993) Building, Dwelling, Thinking. In: Krell, D. (ed.) *Basic Writings.* London: Routledge, pp: 239-256.

Hetherington, K. (1997) *The Badlands of Modernity: Heterotopia and Social Ordering.* London: Routledge.

Hopflinger, F. (2008) A Second Half of Life: a Period in Transformation. In: Huber, A (ed.) *New Approaches to Housing for the Second Half of Life (Living Concepts).* Basel: Birkhauser GmbH.

Illies, C. and Ray, N. (2014) *Philosophy of Architecture.* Cambridge: Cambridge Architectural Press.

Jang, Y. J., Haley, W. E., Small, B. J. and Mortimer, J. A. (2002) The Role of Mastery and Social Resources in the Associations Between Disability and Depression in Later Life. *The Gerontologist* [on-line] 42 (6), pp. 807-813. DOI: http://dx.doi.org/10.1093/geront/42.6.807 [Accessed: 27th November 2017].

Koolhaas, R. (1994) *Delirious New York: A Retroactive Manifesto for Manhattan.* New York (NY): The Monacelli Press.

Koolhaas, R. and Mau, B. (1995) *S, M, L, XL: OMA.* New York (NY): The Monacelli Press.

Krause, N., Liang, J., & Yatomi, N. (1989) Satisfaction with Social Support and Depressive Symptoms: A Panel Analysis. *Psychology and Aging* [on-line] 4(1), pp. 88-97. DOI: http://dx.doi.org/10.1037/0882-7974.4.1.88 [Accessed: 6th December 2017].

Krause, N, and Liang, J. (1993) Stress, social Support, and Psychological Distress Among the Chinese Elderly. *The Gerontologist* [online] 48 (6), pp.282-291. DOI: https://doi.org/10.1093/geronj/48.6.P282 [Accessed: 6th December 2017].

Krause, N (1995) Negative Interaction and Satisfaction with Social Support among Older Adults. *The Journal of Gerontology* [on-line] 50, Series B, Psychological Sciences and Social Sciences, pp. 59-73. DOI: 10.1093/geronb/50B.2.P59 [Accessed: 6th December 2017].

Krause, N (1996) Neighbourhood Deterioration Add Self–Rated Health in Later Life. *Psychology and Aging* [on-line] 11 (2), pp. 342-352 DOI: 10.1037/0882-7974.11.2.342 [Accessed: 6th December 2017].

Landi, D. (2017) Towards New Architectural and Urban Typologies: Thinking, Making and Living as a Post Occupancy Evaluation Method. *Conscious Cities Journal* [online] 3. Available at: http://www.ccities.org/towards-new-architectural-urban-typologies-thinking-making-living-post-occupancy-evaluation-method/. [Accessed: 27th January 2018].

Latour, B. (1991) *We Have Never Been Modern.* Cambridge (MA): Harvard University Press.

Lefebvre, H.(1992) *The Production of Space.* New Jersey (NJ): Wiley.

Lefebvre, H. (2003) *The Urban Revolution*. Minneapolis (MN): University of Minnesota Press.

Liang, J., Krause, N. M., and Bennett, J. M. (2001) Social Exchange and Well-Being: Is Giving Better than Receiving? *Psychology and Aging* [online] 16(3), pp. 511-523. DOI: http://dx.doi.org/10.1037/0882-7974.16.3.511 [Accessed: 27th January 2017].

Lubben, J. E. (1988) Assessing Social Networks Among Elderly Populations. *Family & Community Health: The Journal of Health Promotion & Maintenance*, [online] 11(3), pp. 42-52. [Accessed: 27th January 2017].

Manager (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Manager (2017, b) *Interview* with Davide Landi. Nagakute (Japan). 29th September 2017.

Manager (2018) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018.

Mostafavi, M. (ed.) (2017) *The Ethics of the Urban: the City and the Space of the Political.* Zurich: Lars Muller Publishers.

Newsom, T.J., and, Schulz, R. (1996) Social Support as a Mediator in Relation Between Functional Status and Quality of Life in Older Adults. *Psychology and Aging* [online] 11 pp. 34-44. DOI: 10.1037/0882-7974.11.1.34 [Accessed: 27th January 2018].

OECD (2012) *Compact City.* Paris: OECD Publishing.

OECD (2015) *Ageing in City.* Paris: OECD Publishing.

Piškur, B. (2014) Participation and Social Participation: Are They Distinct Concepts? *Clinical Rehabilitation* [online] 28(3), pp. 211-220. DOI: 10.1177/0269215513499029. [Accessed: 27th July 2018].

Professional Caregiver (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Professional Caregiver (2017, b) *Interview* with Davide Landi. Nagakute (Japan), 29th September 2017.

Professional Caregiver (2017) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018.

Resident (2017, a) *Interview* with Davide Landi. Deventer (The Netherlands), 19th April 2017.

Resident (2017, b) *Interview* with Davide Landi. Nagakute (Japan). 29th September 2017.

Resident (2018) *Interview* with Davide Landi. Helsinki (Finland), 25th June 2018.

Rosenbaum, P. and Stewart D. (2004) The World Health Organization International Classification of Functioning, Disability and Health: a Model to Guide Clinical Thinking, Practice and Research in the Field of Cerebral Palsy. *Seminars Paediatric Neurology* [online] 11(1), pp. 5-10. DOI: https://doi.org/10.1016/j.spen.2004.01.002. [Accessed: 27th July 2018].

Rowe, C., and Koetter, F. (1978) *Collage City.* Cambridge (MA): MIT Press.

Sennett, R. (2006) The Open City. *LSEcities: London School of Economic Cities* [on-line]. Available at: https://lsecities.net/media/objects/articles/the-open-city/en-gb/ [Accessed: 3rd May 2017].

Sennett, R. (2008) The Open City. In: Burdett, R. and Sudjic, D. (eds.) *The Endless City.* London (UK): Phaidon, pp. 290-297.

Sennett, R. (2017) Edges: Self and City. In: Mostafavi, M. (ed.) *The Ethics of the Urban: the City and the Space of the Political.* Zurich: Lars Muller Publishers, pp. 261-268.

Sennett, R. (2018) *Building and Dwelling. Ethics of the City.* London: Penguin Books.

Shaw, B. A., (2005) Anticipated Support From Neighbours and Physical Functioning During Later Life. *Research on Ageing* [online] 27 (5) pp. 503-525. DOI: https://doi.org/10.1177/0164027505277884 [Accessed: 7th November 2016].

Simpson, D. (2015) *Young - Old: Urban Utopia for an Ageing Society.* Zurich: Lars Muller Publishers.

Sloterdijk, P. (1998) *Bubbles: Spheres Volume I.* Los Angeles (CA): Semiotext(e).

The Guardian (2017) *Why Young People are Renting Rooms in a Helsinki Care Home* [online]. Available at: https://www.theguardian.com/society/2017/jun/21/young-people-renting-rooms-helsinki-care-home [Accessed: 12 April 2018].

Torrington, J. (2017) Home Design: is It Fit for Old Age? In: Myerson, J. (ed.) *New Old.* London: Design Museum.

Welzel – Connolly, A. (2014) *A Practical Tool Kit for Carers.* London: Dementia Dialogue.

World Health Organisation (WHO) (2012) *Dementia. A Public Health Priority.* London: World Health Organization.

World Health Organization (WHO) (2001) *International Classification of Functioning, Disability and Health*. Geneva: World Health Organization.

LIST OF FIGURES

APPENDIX

DAVIDE LANDI

A thesis submitted in partial fulfilment of the requirements of Liverpool John Moores University for the degree of Doctor of Philosophy

March 2020

BEHAVIOURAL MAPPINGS

The Humanitas© Settings in Deventer (The Netherlands - 19th April 2017)

The behavioural mapping illustrated how the older residents use the indoor and outdoor spaces and how they interact with other age categories. At 11 am, there were an older resident and young volunteer (in his 20s) sitting and talking on a bench beside the main entrance. Between 11.15 am and 12 pm, in the entrance room where it is possible to find the reception, a small library and some sofas, armchairs and tables where visitors and residents can stop, two of the older residents together with two of their relatives/volunteers were sitting on the couches by the small library shelves. Meanwhile, the other two older residents were leaving the facility through the main entrance. Additionally, in the raised part of the entrance room, three older residents were sitting and talking around a big table and trying to interact with me beside the language gap. Behind them, there were other two residents sitting and talking on the armchairs. Along the interior "shopping boulevard," five people between caregivers and older residents were walking. At 12.10 pm, an older resident was buying some candies in the supermarket, another one was leafing through a book in the nearby library. Furthermore, in the red collective space (café/pub) facing the 'formal garden', one of the younger residents (student) was relaxing. In a near collective space usually used for parties and other recreational activities, another younger resident was having a job interview. At 1 p.m., as every day there was a big collective lunch in the double high multipurpose room on the first floor. There were around 70 residents having lunch. If the evening meal is cooked by students, the lunch is prepared by a professional cook supported by volunteers. The residents can choose between two menus. There is no particular diet; the dishes are based on the cultural background of residents.

Immediately after the lunch, there was a long line of residents standing in front of the elevator shafts because most of the residents were going back to their activities. Between 2 pm to 2.30 pm, in the south-west wing, three residents were talking around a table in the central collective space together with two caregivers, and another two were sitting in the conservatory. On the fourth floor of the central block, where the more private spaces for caregivers are placed, there was a woman cleaning. Lastly, at 3 pm, three older residents were talking in the entrance room. Two of the younger residents (students) were returning after the lectures at the university, and they stopped to talk with the older residents.

The Rudolf© Settings in Helsinki (Finland - 25th June 2018)

A four-hour behavioural mapping revealed the relationship between Rudolf's© indoor and outdoor physical spaces and its occupants. In this particular case, the principal investigator dedicated four hours to the East Block and four hours to the central Green Area and the West Block. The East Block: between 9.00 am and 10.00 am two staff members were walking along the corridor in the lower ground floor (LG), while one of the older residents and two staff members sit together at the table beside the main entrance. Simultaneously, three older residents had breakfast at the restaurant while watching television. At 10.10 am, a member of cleaning staff repeatedly walked through the LG corridor while one of the older residents waited for the wheelchair lift. Between 10.10 am to 11.30 am, two older residents were talking inside the restaurant.

Additionally, three older residents walked along the corridors toward the communal room at LG. Other two older residents followed them while two young residents entered in Rudolf© from the main entrance and took the staircase leading to their residential units. At the first floor, most of the residents were in their residential units, and only two watched television in one of the communal areas. From 9 am to 12 pm, the manager and one of the occupational therapist worked in their offices in LG. At lunchtime, between 11.30 am and 12.30 pm, 25 residents were at the restaurant. Two occupational therapists supported them while two members of the cooking staff served the meal. At 12.20, one of the two occupational therapists left the restaurant. At the end of lunch, the two cooking staff members started cleaning up the eating area. At 12.30 pm there was a long queue of older residents standing opposite the wheelchair lift. After lunch, most of the residents were going back to their apartments or activities except for a group of 15 people who played Bingo from 12.30 pm to 2.30 pm in the communal room at LG. Between 12.30 pm and 1 pm, two cleaning staff walked along the corridor at LG. A professional caregiver followed them together one of the older

residents who was talking on the phone. At 1 pm, an older resident on a wheelchair stopped at the restaurant to watch an old movie. A professional caregiver sits beside him to complete some paperwork. A couple of older residents joined them but left shortly after. Meanwhile, two professional caregivers and two older residents walked along the corridor at LG. Additionally, another older resident joined the group of 15 residents who played Bingo.

The Green Area: at 1.15 pm, two staff member had a break during their working hours while two community members were jogging. From 1.30 pm to 2.30 pm, one of the young residents sits on a bench before to go to work together with one older resident, while two professional caregivers moved from one block to another. The West Block: from 2.30 pm to 3.30 pm two professional caregivers entered their offices on the first floor. Ten young residents with mental disabilities were in the communal area. Some of them were chatting, and others were playing group games. Between 3.30 pm and 4.15 pm, still, 15 older residents were in the more public dining room while two were in the more intimate one on the second floor.

Furthermore, one older resident was sitting in the communal area opposite the dining room. Around 4.00 pm, three professional caregivers walked along the corridor. At the third floor, eight older residents were in the more public dining room to watch television, and only one was in the smaller dining room between 4.00pm to 5.00pm. At the same time, nine older residents were in the communal areas engaged in different recreational activities. At 4.30 pm, a young resident joined the group's activities.

The Gojikara Mura© Settings In Nagakute (Japan - 29th September 2017)

A four-hour behavioural mapping exercise revealed the relationship between occupants and the Gojikara Mura's outdoor and indoor spaces. The Nursing Home: between 9.00 am and 10.00 am 2 staff members, a volunteer, and a visitor were sitting and talking at the table/counter of the entrance cafe in the lower ground floor (LG). Simultaneously, the manager and other two staff members were working at their desks. At 10.05 am, the architect, Mr Oi Koji, arrived while one of the staff members left. Between 10.10 am to 10.30 along the at the LG, there was a staff member cleaning one of the four-bed rooms and another one came out from the Japanese Public Bath opposite to the room. Along the "Gata-Gata" corridor, at the ground floor (GF), there were around two to three people sitting on chairs or wheelchairs and looking outside towards the central courtyard. In the double-height recreational room, 10 -12 residents and three professional caregivers were sitting and talking around a big central table. In particular, two of them were watching television while other two were opposite to the wooden idol of the shrine praying. Between 10.30 am and 11.30, 10 -12 residents were in the other recreational room at first floor (FF) always sitting around a table, sleeping, or talking. Another visitor, a lady from the nearby residential area, was sitting at the counter of the restaurant and having breakfast. Other two residents were sitting along the corridor at the FF, looking outside towards the kindergarten. Meanwhile, one of the staff members was cleaning the small library always at the FF, while another staff member was walking on the floating steel bridge connecting the two buildings, opposite to the small library. From 11.30 am to 12.30 pm, two residents were sleeping on the sofa in the central communal area opposite to a floor to ceiling window at the ground floor of the north block. At the same time, one of the staff members was walking around GF taking care first of a resident still inside the bedroom then of a resident inside the bathroom. At 12.30 pm four to five young women (mothers of children attending the kindergarten) were sitting on the wooden bench in the green area between the two

502

blocks of the nursing home. While 10 -12 children and four tutors of the children's day care centre were playing in the "Gata-Gata" courtyard of the south block. At 1.00 pm one of the volunteers was taking care of the garden between the two blocks and three staff members were still working in the entrance space of the LG. At the restaurant, 16 - 18 residents and three staff members were having lunch, while one resident was sitting at the counter reading a newspaper with one of his relatives.

The community centre: between 10.30 am and 11.00 am, three tutors and five children from the children's day care centre were playing outside opposite the wooden building. Simultaneously, an old woman and a volunteer, was preparing the tea in the traditional kitchen inside the community centre, while a young lady, probably one of the mothers of the children, was sitting on the tatami. At 11.00 am, two older residents and two volunteers were walking along the street which stops opposite the entrance of the nursing home.

The kindergarten: from 11.00 am to 12.00 pm most of the children and teachers were playing outside in the green playground right behind the entrance gate. Then they moved into the classroom and had lunch until 1.00 pm. Two of the teachers were relaxing in the ceremony hall. The classrooms groups 20 -25 children.

The assisted living areas: between 11.00 am to 12.00 pm at the lower ground floor entrance space (LG), one of the staff members was working on the café counter while a couple of older adults were leaving the room. Most of the residents were walking along the corridor towards the restaurant. In fact, three older adults were interacting with other visitors, and other five were walking along the corridor. Therefore, two staff members were cleaning some of the private rooms while another one was cleaning up the Japanese Public Bath. From 12.00 pm to 1.00 pm, two staff members and the manager were still working in the entrance space while five nursing students and one

teacher were going to the restaurant for lunch.

The Nursing School/vocational school: between 12:00 pm and 1.00 pm three or four of the teachers were walking along the passageways, moving from one classroom to another. Students were in groups of around 10 people in different classrooms having lunch or still studying.

During the behavioural mappings' time frame, the café and the art and craft shop were closed.

LOCAL COMMUNITY AREA. THE FAMILY SYSTEM AS A DESIGN TOOL.

A CONVERSATION WITH RIKEN YAMAMOTO
(RIKEN YAMAMOTO AND FIELD SHOP)

The conversation took place during a face-to-face meeting at the Riken Yamamoto and Field Shop's Yokohama office in September 2017. While drinking a cup of Japanese green tea, Riken Yamamoto started by describing the extremely bureaucratic Japanese state. A system based on the notion of "one family = one house" which has brought to an "institutionalization of housing" so to a failure of housing policies. Uniform isolated facilities, connected by uniform infrastructures, and characterized by uniform management, which have determined the "standardization/destruction of local communities" (Yamamoto, 2012). This suddenly revealed parallels with the British context. Both regions characterized by a new demographic and socio-economic structures have been struggling in providing a sustainable model shift (Landi, 2017). Overlooking cultural and circumstantial obvious divergences, the "Local Community Area" project (2012) falls within this 'design niche.' It started with a critical analysis of the contemporaneity. This fostered a diverse way of thinking architecture. The process consequence of a collaboration between Riken Yamamoto and three young Japanese architects (Go Hasegawa, Hiroshi Nakamura, and Ryuji Fujimura) led to a totally new inhabitation model. The conversation revolved also around some our shared interest and gave back to architecture the role of a tool rather than an artistic expression or a business.

Davide Landi (DL): Nowadays, the two generative dimensions of cities, the social and the economic dimensions, have completely new settings. The problems after the 2008 economic crash, the new demographic structure, a more relevant role of technology in everyday life underlines the contemporary necessity of new architectural and urban solutions. Since a body of your works is a consequence of a deep understanding of the urban, economic and social context; I would suggest examining the theoretical project "Local Community Area" (LCA) (2012) in terms of comprehension of a "surrounding", the design questions raised around this "surrounding", the strategies you articulated to address those questions, and its socio-economic implications.

Riken Yamamoto (RY): Generally, architecture is conceived within a private site, hosting a private building so it becomes a "Private Architecture." Consequently, optimal solutions are sought and found in limited environments. This has been contributing to the production of individualistic urban scenarios in which people or nuclear family live alone. Additionally, architecture is generally "functionally created." Functional means created to satisfy a specific demand. Arendt defined this process as "materialisation." Materialisation is the conversion of a demand into a physical object, in this case, a building. Unfortunately, an architecture "functionally created" produces an architecture strongly standardised so the role of architects becomes less relevant. A building is not something that is created to obey a bureaucratic order. It is not created to obey the order of special-interest-group. It is not created to obey the order of an adherent elective despotism. If we believe that architecture is created on a social demand, the concept of community and its structure/organisation is lost in this process. Nevertheless, my practice and I have been thinking about an architecture based on the understanding of a "surrounding." An architecture created together with its "surrounding." This "surrounding" is a comprehensive term which considers environmental/urban, social

506

and economic patterns characterising a site. The "outside." An architecture that fosters relationships between inside and outside, public and private. An architecture which exists to enable people and local communities to actualise themselves. To actualise themselves means "to make themselves articulate." An architecture that aims to strengthen the existing fragile social patterns or to generate a new one. This is an architecture that contributes to its "surrounding," a "building which is like a city." In fact, if this "surrounding" represents the "world," an individualistic building which has no relationships with the outside does not contribute to the creation of the "world." Besides these, we could not avoid the making of an architecture with its own character, very often defined by its relationship with its users.

DL: For example, Hegel and Lefebvre wrote that the exterior provides architectures with its symbolic character; the prevalence of interior makes a building independent, detached from the surrounding. However, Riken Yamamoto and Field shop's projects are far from the binary/dualistic logic characterising modern and post-modern architecture such as interior/exterior, private/public, and form/social engagement. This dualism instead coexists, and redefine a new balance that produces diversity.

RY: Conventionally, we believe that freedom is present inside a private space, and the public space is regulated by a frame called "infrastructure." This frame was generated and continuously supervised by governmental authorities. Therefore, private and public space are apparently strongly separated almost rejecting one another. The freedom found inside a private space is carefully preserved against the governmental authorities. A designed private space can be defined as a house. This characterisation can be found also in ancient time. In fact, Greeks defined the private space/realm of a

house as "oikos." This word is close to the Japanese meaning of "IE," delineates the concept of "privacy." A realm of "privacy" can be translated into a realm of women or slaves, a detached realm from the public one. The realm of a man called "andronitis" existed between the public realm (the Polis) and the realm of women. Consequently, this private space can signify a condition of isolation and confinement. Sheltered and protected by the "andronitis" but at the same time dividing the "oikos" from the "Polis." On the one hand, are we entirely satisfied with living in isolated houses? On the other, is living in urban space bureaucratically regulated satisfying? Why do we accept this condition? These are the questions that move our architectural thinking.

My practice and I start every project with this simple scheme. The private space is part of the public one. Another historical example can be found in Roman time. One of the characterising element of the domestic architecture was the vestibule. In traditional Japanese architecture, we have a similar space: the ceremony room. Both represent a very public room inside a private environment, the home. Consequently, this creates a connection between private and public space generating what can be defined as "in-between space." This "threshold space" simultaneously connects and separates. An intermediated space between the two different realms. A space that does not belong neither to the "Polis" nor to the "oikos." A project and its architects must deeply take into consideration this spatial characterisation among public, the in-between and private space as a container of relationships. In fact, these three different types of space can be found in many of our projects as well in the "Local Community Area."

DL: This project questions the conventional definitions of public and private.

RY: Public and private have subjective definitions, they vary according to the definition given by people. For example, in this project, public means that most of the spaces are used by people of the "surrounding" but it is not accessible by everybody, the public

in a sense of community space but not public as any street. Indeed, this clearly states the central role of people as users at different scale. If you consider architecture as a medium for improving people 'life or triggering some lifestyle changes such as in this case shifting from detached or semi-detached houses into a shared environment. A project becomes successful only when designers focus on the relationships that a building generates between residents and itself, and the "surrounding" and itself. Paradoxically, clients have different interests, so they should be overshadowed.

DL: The "Local Community Area" project deliberately manifest a contraposition also towards modern and individualistic urban, socioeconomic and energy models.

RY: The modern city has been a city based on the concept of zoning. Therefore, places for recreation, places to live, places to work have been detached from one another. Transportation systems, public or private, have been the connecting elements among the different places. Privacy and security have been the main principles emphasized in this model. Based on the "one family = one house" unit, it is not anymore able to adapt to major socio-economic changes. Nowadays, this model is negatively influencing the city of the 21st century. An urban pattern strongly affected by a new economic structure, migration phenomena, ageing population and declining birth-rate. The "Local Community Area" project questions the modern city model, and it proposes a new one in which housing, transportation and industry are integrated. It is a building and a city at the same time.

The "Local Community Area" project was proposed at the time of a critical economic situation in collaboration with three young architects: Hiroshi Nakamura, Go Hasegawa,

and Ryuji Fujimura. It was more inspired by Maki`s "Group forms" than Kurokawa and Kikutake`s metabolism concepts. In fact, the model emphasizes the possibility among the people to live and work together and to support each other. A completely different way of living from the one described before. How should they live together? How will it be different? How will information be shared? Questions concerning everyday life must be taken into consideration. Therefore, each of the residents will have a small private portion which will be integrated with a large shared portion. Additionally, this also fits with the requirements of an aged demographic structure in which the percentage of people with physical and mental impairment such as dementia will increase. Toilets, showers and mini kitchens are shared by a group of 5 to 7 people called "s-group," they are spacious as possible and in sufficient number. Residents might interact with each other by teaching special recipes, having parties, etc.

Fundamental will be the role of the "life and welfare centres." They will efficiently deliver services so that residents and conventional institutions will be less burdened. There, residents can get advice related to everyday issues, together with more medical services such as care facilities, day-care centre, and clinic. Integrated with cafes, convenience stores and other retail services, residents will visit it also in an informal way. This represents a diverse solution to a more traditional welfare system already in bankrupt without reducing the quality and scope of services. Social security will not be threatened.

Furthermore, residents will adopt unique economic activities so able to self-sustain through these small opportunities. A resident will always have in addition to his/her "nema" (private space) a more public space in order to provide various services (i.e. selling, refreshments, etc.). In fact, people are free to rent space in any way that they want. For example, a resident can rent a large "mise" (public/shop space) and use it literally as a shop. Ambitious older adults will be able to actively contribute to

the community with their know-how and skills. Otherwise, they might need nursing home care service and occasionally care of the community`s children. A rent manager will manage all the rents proportionate to the volume and will be aware of existing vacancies.

The government provides all the required infrastructures. All the "Local Community Area" projects are energetically autonomous. The relationship between energy production and consumption is totally different. Spatial continuity and semi-outdoor shared areas will maximise natural ventilation, heat insulation, and minimisation to sun exposure during summer time. Additionally, alternative forms and use of energy such as solar power and solar heat will be integrated. The individualistic urban model of the modern city has been applied also from an energy perspective. In fact, each house has been having its own mechanical system and equipment. Nevertheless, the "Local Community Area" project will be characterised by a shared energy infrastructure. In particular, 6 "s-groups" will share what we define as "energy farm" (solar heath, etc.) They together will constitute an "m-group." 4 "m-groups" together will share a spa, laundry, common storage, restaurant, cafeteria and a generator. This group will be called as "l-group." 4 "l-groups" will share the "life and welfare centres" so defined as "xl-group." Therefore, energy is not anymore generated by power plants 200 km away but LCAs produce energy at their own expenses and consumes that energy within their area. Furthermore, it will have its own transportation system based on Community Vehicles (CVs). They are used by for transportation inside the Local Community Area. CVs will enter in narrow streets and even in buildings but with a load capacity bigger than electric bicycles or wheelchairs. CVs will move on dedicated roads and recharged in stations where batteries will be changed. Medium and long distances travel will be supported by shared public transportation such as trains, automobiles and buses. This will reduce maintenance and management related costs and the need for parking space. From a technological perspective, the construction system will use

prefabrication. Modular elements (frames and panels) of 2.4m x 2.4 m x 2.6 m will be combined so that spatial requirements will be fulfilled.

DL: Consequently, cultural notions such as the "IE" concept or archetypical mixed urban patterns are design tools.

RY: On one hand, the Japanese terms "IE" represents the "family system." The family is a community part of a bigger community. The "spatial threshold" between these two communities mediates their relationships. The "Local Community Area" project translates this notion into a spatial "arrangement" made of a private, a public, and an in-between unit. This spatial "arrangement" is completely different from the more traditional Living, Dining, and Kitchen (LDK) type. In fact, the essential "IE" consists of a "mise" (service room, glazed on the outside) and "nema" (bedroom, highly private space). According to their combination, one or more people will live in one "IE." For example, we can have a library room and a bedroom by combining 4 "mise" and 1 "nema," or a double bedroom and a living room by combining 2 "mise" and 2 "nema," so on …

On the other, we have been trying to create an architectural frame obviously based on contemporary parameters but at the same time referring to some archetypical living arrangements.

Charles Fourier (1772 – 1837), one of 3 thinkers who Marx named as "utopian socialist," developed a housing model for workers in which residents were living communally. The community was organised around the concept of one "superhuman family," the society in which its political form was called "nation." The architectural

512

transposition for this community proposal was the "Phalanstery." Each community called "Phalanx" consisted of 810 men and 810 women. Residents were formed in age groups such as "nurslings (0 -1), weanlings (1-2), imps (2-3), and urchins (3-4)," as well as older adults: reverends, venerables and patriarchs. Through this organisation, all the community`s members could participate in working and recreational activities such as drama, reading, etc. There was no specialisation in a particular activity, so members could easily move from one activity to another. Interaction among residents, consequently, was maximised. Passions according to Fourier was the source of the different activities. These would harmonise the communal living.

Furthermore, also archetypical economic models were essential in the development of the LCA project.

In the Kensai area, the economy is still based on small familiar enterprises, so families still preserve a strong political and economic role. Continuing on this parallel with Italy, around the 10th century the "Comune/City state" system was established. These cities were small independent economic realms, where some of the characterising aspects have been preserved until today. However, the Globalisation and standardisation process has been mining this unique but fragile economic character. The "Local Community Area" project represents the possibility in which to apply in a contemporary manner some of this economic uniqueness. Consequently, the natural following step is to live together with a different a diverse economic model.

DL: Despite these cultural notions on which the "Local Community Area" is based on, this model can be implemented in different "surroundings", diverse from the Japanese one.

RY: It is possible. The main factor influencing its applicability is the site`s character. The "Local Community Area" project was developed considering an area of 1 ha with a population of 750 - 500 people, this is very common in an urban context. In fact, 1 ha of traditional wooden Japanese hosts 390 people; 1 ha of traditional social housing 187.3 people, and 1 ha of detached/semi-detached houses hosts 70.2 people. Nevertheless, it can be used also in areas with a lower density. Additionally, the project should not be adopted only from an architectural perspective but as whole built environment including infrastructures such as transportation system. The engagement with the different layers of a built environment produces a sustainable scheme. Hypothetically, I can illustrate you an example that we developed in Yokohama. Its total area would be 22830 sqm. In detail, the facility would occupy a surface of 14722 sqm, in which the floor area would be 42619 sqm. This would include:

_ Residential area: 17048 sqm;

_ Storage: 7671 sqm;

_ Schools: 4893 sqm;

_ Communal spaces: 13007 sqm.

This LCA project would accommodate a population of 1700 people (750 people/ha – 255 people < 14 years old; 1105 people between 15 – 64 years old; and 340 people > 65 years old). The rent would be:

_ 1 unit: 34400 JPY/month (230 GBP/month);

_ 2 units: 52800 JPY/month (355 GBP/month);

_ 3 units: 71200 JPY/month (480 GBP/month);

_ 4 units: 71200 JPY/month (600 GBP/month).

Furthermore, the communal areas would be:

_ 11 SPAs;

_ 3 convenience stores;

_ 11 restaurants/rentable kitchens.

DL: We started by talking about the theoretical "Local Community Area" project as a design proposal able to face contemporary and future challenges, and we ended by talking about primitive cultural notions. I would like to take a step back and ask if you are willing to provide a vision for the city of tomorrow and the architect of tomorrow.

RY: The city of the future will be based on the "Local Community Area" model fostering diversity of the social, economic and demographic patterns, a mixed environment where people work and live together. In this scenario, architects must create the "object of the world." The "world" is a space with a strong relationship to its surrounding. It occupies a specific surface, but it is not a closed space. As the "Polis," the "world" never becomes extremely large that cannot be managed by residents. We always see the "world" as space of the past. It is indeed a precapitalistic space. Unfortunately, contemporary architects do not properly meet this expectation. This is a consequence of a functionalist architecture useful to everyone driven by a bureaucratic organisation. Consequently, functionalist architecture does not necessarily require people of local communities. Additionally, this has been producing an architecture which has torn apart the "world" in order to make durable buildings. An architecture that privately consumed the "world", an architecture of "economic effects." Architects have become designers of packages not related to the "surrounding." Functional buildings that cannot be work of architects so that is why there is always a kind of resistance to buildings which are

work of architects.

Architects must propose new models tangent to the sphere that characterise architecture.

Interviewed: Riken Yamamoto is the principal of Riken Yamamoto and Field Shop. The practice was established in 1973 after completing his master studies in Architecture in 1971 at the Tokyo University of Fine Arts, and 2 years post – graduate/research studies at the University of Tokyo – Hara Laboratory where he wrote the thesis A Discussion on Thresholds (Shikimiron). Nowadays, Riken Yamamoto and Field Shop has branch offices in Zurich (Switzerland) and Beijing (China) besides the Yokohama (Japan) one, and counts several built projects in different Western and Eastern countries such as China, South Korea, Japan, and Switzerland.

"EDITING CITIES."

A CONVERSATION WITH PROFESSOR HIDETOSHI OHNO

(UNIVERSITY OF TOKYO)

The conversation took place during a face-to-face meeting at his private Tokyo office in August 2017. In a humid hot summer day. Initially, Professor Hidetoshi Ohno asked me about my personal perception of Tokyo city, then we started to talk about the "Fibre city" theoretical project.

This project falls into the "shrinking city" theoretical framework (OEDC, 2012). In particular, Tokyo, now one of the largest urban settlement in the world, will go through a rapid population decrease, and ageing process. This will imply a vast deterioration of infrastructure. By 2050, the population over 65 years old will represent the 40%. The Fiber city project challenges a new theory of urbanism. It starts from a comprehension of the socioeconomic contemporary scenario. Approaching the city as urban fabric, the project challenges the "fibers units," linear spaces present in Tokyo since ancient time, by connecting, editing them. Therefore, re-design Tokyo's information, transportation, industrial, as well as its green networks.

Davide Landi (DL): Let`s start the interview speaking about the Ohno Lab at the University of Tokyo. How did the "Fiber City" project unfold? How did the Lab adopt the analogy of the city as fabric?

Hidetoshi Ohno (HO): First, I must illustrate two totally opposite socioeconomic and political scenarios. One scenario is where the Japanese urban society manifested itself. Back in the time just after the World War 2 (WW2), the Japanese urban landscape was strongly bombed out, while most of the soldiers were returning from the battlefields. At that time, this meant an increasing population willing to live in cities. Parallel to this tendency, Japan was going through an industrialisation process and technological revolution. Consequently, the economic condition of the population as well as of the country was surprisingly improving until the explosion the economic bubble. This context asked for certain urban design strategies which brought to an urban sprawl and the rise of the new towns. The contemporary city is a clear consequence of the described socioeconomic and political patters. Nevertheless, the contemporary city is also the urban frame of a totally different scenario. Nowadays, Japan has a persistent economic recession, the population is ageing, and the low birth rate is causing a decrease in the population. By 2050, the population will be one-fourth of the actual Japanese population, and one third will be over 65 years old. Most of the Japanese cities are shrinking, smaller villages disappearing. In fact, Japan is facing three diverse types of "shrinkage": population, environmentally (i.e.Tokyo has an extremely high percentage of empty buildings, and infrastructure built for an expanding city are difficult to maintain), and the earthquake's effect. Presumably, these socioeconomic tendencies will persist in the future decades.

Therefore, the Onho Lab started from an understanding of the contemporaneity, so we aimed to fill the gap left by a modernist Urban Design approach which is now out of date. We searched for a "compact metropolis" merging the relevant aspects f a

metropolis and the environmental sustainability of a compact city.

The "fiber" refers to a "string thread-like object." At the urban level, the Ohno Lab identified the "fiber" as a linear urban element or tubular space. In the past, these "fibers" were more common in traditional Tokyo. They can be still seen, in the approach of temples or shrines, in the river embankments. Today, they are found in transportation networks. Therefore, "fibers" are a space of movement, fluidity, speed. A place for interaction and exchange. Additionally, "fibers" are a linear structure able to define a place. Therefore, we decided to use the "fiber" as a medium for the manipulation of the urban, so that the existing context is not neglected.

Suddenly, the organisational image of a "fiber city" is a fabric. "When "fibers" are twisted, a thread is made; when a thread is woven, a fabric is made. The fabric is soft and even if one part is damaged, the whole is not destroyed. The different characteristic appears as a pattern/texture."

DL: Projects such as the "Fiber city" imply or trigger some lifestyle changing. This kind of projects become successful only when designers focus on the relationships that are generated between users and themselves. Due to the large scale of the project, it is difficult to get to know to users and talk with them.

HO: In the modern city, certain types of urban proposals or strategies were thought with a "top-down" attitude. Successively, these strategies were applied to the urban environment. Their actualisation was always the outcome of investors or bureaucrats able in the management of economic resources obtained through the taxation system. As described before, the socioeconomic contemporary condition is completely

different. The lack of resources both economic and environmental imply a participatory necessity. A project such as the "Fiber city" can be realised only by giving responsibilities to citizens, also in the design phase. Responsibilities mean involvement. They become main actors in the "management" of the area where they live. This reverse some of the individual lifestyles of many Japanese citizens.

The biggest challenge is, in this case, the creation a new society.

DL: It seems that the fragments, elements in your projects have two different origins: some of them come from outside sources, such as different places or spaces that bring in foreign ideas, and some of them come from your own/cultural vocabulary. On the one hand, it is easy for us to identify which ones come from a diverse experience such as the British Archigram Group such as the "Instant City Project". On the other, it is more difficult to understand what instead is part of the Japanese cultural background (i.e. "Orange Round" programme mirrors the idea of ephemerality)

OH: In a globalised society, the circulation of ideas, information and goods happens continuously. The advent of less physical infrastructures such as Information Technologies has nurtured the adoption of a "shared semiotic." For example, here in Japan when you go to a supermarket most of the labels use Japanese characters. Although, the iconography, the image of a certain product is the same of other countries. Therefore, any person can independently do the shopping. Back in the time when I went to Europe for studying, nothing was extremely new for me. I could access to much information through the available media such as magazines, newspaper, and television. Consequently, I could develop that "shared semiotic."

Parallels can be found with architecture and urbanism. There are some cross-cultural/

cross-national concepts that are part of our primitive identities, so simple to adapt in different contexts. Urban designer and architects have the great responsibility to define an "adaptation language," a balance.

On one side, the "fiber city" project proposes strategies that aim to an economically efficient and environmentally sustainable contemporary urban environment. In particular, the "green fingers" reorganises the suburban areas affected by a strong population decline. It gradually concentrates suburban housing in zones within walkable distance from train stations, inside a green belt. The "green partition" improves the residential settings by increasing the presence of the natural environment. This relevantly minimises the potential fire damage in case of earthquakes or other natural phenomena. The "green web" coverts the Tokyo Metropolitan Expressways ring road into pathways for emergency disaster relief and green infrastructure. The "urban wrinkles" revitalises linear urban spaces of relevant interest. It emphasises the historical and cultural values of a place.

On the other, the "fiber city" project aims to create an urban environment worthy to live in. Consequently, it also proposes what was defined as "orange infrastructures." The "dieting city" want to rediscover the characterising aspect of the past such as walking, the close-knight group, the environmentally-friendly lifestyles. The "orange web" rethinks the public transportation network in order to satisfy the needs of a cars free city. In an ageing society, the possibility of preserving mobility reduces the big economic and physical burden. The "orange rounds" wants to preserve a certain minimum level of service locality. In fact, the ideas are to put some public services on a "car" and let it go around in different cities. The car services multiple cities with staff and equipment. Besides health care and public services, the "orange round" bring recreational and cultural activities such as theatre, music concerts, library, etc. The "orange table" systematically provides temporary foods shops and restaurants, so that

people can eat outside and together. The "blue neckless"develop a system of water transportation routes.

In particular, the last two orange infrastructures are based on this idea of temporary, time and food. All of them are peculiar to the Japanese cultural context. However, the same idea of temporary was also used by the Archigram group in a different time, in a different context as you mentioned.

DL: Another quite interesting aspect is the parallel between Japanese National Strategy (NSS) (2015) and the Tokyo Fibre City Project (2005). Maybe we could talk about how to achieve certain targets in order to influence institutions and future policies.

HO: There is no direct relationship between the "Fiber city" project and NSS. This last one was issued by the National planning department and developed by engineers. Here in Japan, the urban question is transferred to technicians that mainly work at the infrastructural level. There is a clear dividing line between architecture and engineering. These technicians might have taken part or listened to my lectures.

DL: Tokyo has a particular universe of fragments and diversity including those places or spaces that have not been architecturally codified. We are curious about how you bring back certain recollections, certain journeys, a social life which belong to Tokyo`s diverse identity. Starting from an awareness of an ageing population.

HO: Japanese do not value as in other cultures the historical built heritage: "few are left form our fathers time, nothing will remain from our grandfathers' era." Nevertheless, our cities never developed an urban space such as the western piazza, instead, they had a linear-like morphology. In fact, the streets, linear urban element, were the place for encounters since ancient time. Therefore, the idea of working on tubular space, linear urban elements, "fibers" comes from our Japanese urban background. The Ohno Lab wanted to define a new balance by the manipulation of the urban fabric through longstanding linear urban space and detaching certain informal historical urban spaces from the notion of economic efficiency. An example is the "meisho." It is an unformal urban space in which the natural element is latent, "meisho" is a natural window in the artificial urban settings. In the last 50 – 60 years, the "meisho" have rapidly disappeared as a consequence of the rapid Japanese urbanisation. They have totally different characteristics from more formal urban parks which have not contributed to the formation of a communal sense unless money is spent. Formal urban parks are the output of a specific and detailed planning, "consumeristic spaces." In an ageing society, these consumeristic spaces weaken older adult existence. Instead "meisho" require participation, interaction and exchange which are the essence of cities. In a shrinking city process, the challenges are: the creation of a car-free city, saving "lonely individuals" from an individualistic and efficient society, and making a city in which "warm relationships" can be built.

DL: This easiness allows people to appropriate space without imposition or restrictions. Therefore, space is constructed with very simple actions.

HO: Another example is a "chain-like infrastructure" mentioned in the "Fiber city" project that fills the already empty/urban void. In this case, the generated new green areas are

managed and cared by the neighbourhood and neighbours. This implies participation and collaboration.

A totally different attitude from a top-down approach which very often is driven by economic private interest. Additionally, there is a certain obsession in the continuous necessity in building new infrastructures. The real necessity is the development new urban strategies.

DL: In Ricky Burdett's book The Endless City is described how the modern city was built for the machine not for individuals. Therefore, this subtracted spaces to people. The Tokyo Fibre City project tries to give back the city to the human beings by converting some existing infrastructure in public spaces.

HO: An example is automobiles. We are an automobile based society. They have been a medium of convenience for increasing mobility, capabilities of humans, service delivery. Cars are particularly indispensable for caretaking and self-support, provide a sense of independence. However, in an ageing society together with a different environmental sensibility, an awareness that there are more victims of traffic accidents than a natural disaster, an economic cost represented by the necessary infrastructural maintenance, this individualistic medium of transportation should be questioned again. In detail, when we talk about mobility older adult easily become disadvantaged. The "Fiber city" project considers mobility as an expression of democracy and the maximisation of mobility and communication also in later stages of our lives (when the chances of having mental or physical disabilities increase) is irreconcilable in the requirements of a car-free city.

In one of my book, I critically analyse the "the small transportation might change the contemporary world." In particular, there are two main transportation systems: "small transportations and big transportations." The first one includes private cars, etc. The second category instead includes all the transportations that big group of people displacement such as trains, aeroplanes, etc. Consequently, they are relatively economically accessible, cheaper. In order to make them available, Governments and private investors invested big capitals. In an ageing population perspective, the obvious expectation is that the use of these "big transportation" would be maximised, so other infrastructures used for "small transportation" such as secondary streets are converted in public accessible spaces and pedestrian areas. Provocatively, older adults with mental and physical environments would not be able to experience the converted public accessible space and pedestrian areas. Therefore, a new generation of "small transportations" represents an alternative and sustainable solution for supporting older adults' mobility. These use the existing infrastructures without requiring substantial interventions. Based on the notion of "micro-credit," small/tiny transportation systems managed by public/private companies make available a medium of transportation to all. This is a diverse way of conversion.

Besides, there is a totally new generation of infrastructure, virtual infrastructures. Urban designers and architects should not hesitate to speculate on them so that a new equilibrium between physical and virtual can be defined.

DL: Basically understanding the realm of its possibilities and potentialities. Tokyo Fibres City project might represent a benchmark for others.

Yes, designers, however, should carefully filter the basic notion of this project before in

order to apply them in a different context.

DL: In one of his lecture, Prof Antoine Picon (Harvard GSD) stated that Urban Designers and Architects have been contributing in generating Urban Scenarios for the Post Modern City, but the contemporary city requires different Urban Planners and Architects. Therefore, in a contemporaneity characterised by a society entering in the "knowledge era," information is daily generated and shared, we would like to hear your vision for a designer of tomorrow.

HO: Our society will still require designers of "monuments," scenarios, designers whose design context is not the physical world but speculate in the virtual world. Nevertheless, the real opportunity is the act of creation as an intervention in a pre-existing context or a rearrangement of elements. It is, in other words, a kind of editing. Think about cooking, you create something new from single individual ingredients. Additionally, time becomes a further dimension to design, defining a line between ephemerality and persistence will be the challenge. Not anymore just an invention from scratch.
Those two categories deal with different kinds of parameters and should coexist.

Interviewed: Ohno Hidetoshi is the Emeritus Professor at the University of Tokyo, School of Architecture. After completing his master studies in Architecture in 1975 at the University of Tokyo, he worked from 1976 to 1983 as an architect at Maki and Associates. Then from 1983 started his academic career before as Assistant Professor to Professor Fumiko Maki, then as Associate Professor.

THE "NEW OLD."

A CONVERSATION WITH PROFESSOR JEREMY MYERSON
(ROYAL COLLEGE OF ART)

The conversation is the outcome of several virtual conversations/exchange of emails that happened between March 2017 to July 2017.

The UK in a time of housing shortage, most of the houses are under-occupied (Torrington, 2017). Additionally, the housing stock is mainly designed for the family market (i.e. a 3 bedroom house and a garden) or young professionals in more urbanized areas such as London (Johnson, 2010). These are consequences of an urban spatial segregation in order to satisfy some specialization requirements and improve efficiency (Burdett and Sudjic, 2008). The so far produced social segregation (Burdett and Sudjic, 2008) can be addressed only with a mix of tenure (i.e. communities presenting a mix of households, incomes, ages) and an appropriate density in terms of land use and public transportations (Johnson, 2010). Furthermore, this does not properly fit with an old population whose physical and cognitive decline is often inevitable (i.e. dementia is a life-changing condition for individuals and their caregivers/families.) (Torrington, 2017). On the one hand, this scenario is inevitably affecting communities, neighbourhoods, therefore housing. On the other hand, it represents a challenge that must be taken over by designers beyond any cultural stereotypes. Architects must think an architecture more in terms of an innovative social model. This will intrinsically and positively influence the health and well-being of residents, both young and old (Torrington, 2017; Myerson, 2017). A properly designed house is central in delivering contemporary health, care and social interaction issues (Interview Landi, 2017; Myerson, 2017).

A "New Old" asks for new settings (Myerson, 2017). These might fall into the interge-

nerational solution framework largely promoted in most of the developed countries as innovative and sustainable arrangement (Labit and Doboust, 2016).

Davide Landi (DL): Authors such as Peter Laslett (1972) widely described the relationship that links "dwellings, households and family structures." Nowadays, our contemporary society presents a new socio-economic and demographic structure; so how this new context is affecting conventional architectural and urban models?

Jeremy Myerson (JM): Demographic change and changing family structures are having a profound effect on urban models for housing. In particular, Judith Torrington (2017) suggests that the housing stock is not well adapted to older people, and there are many mismatches between their needs and the homes they inhabit. First of all, the housing stock is designed predominantly for families; a typical home has three bedrooms and a garden. One consequence of increasing longevity is that a large number of older people are occupying houses designed for bigger households. On a national scale, homes in the UK are under-occupied at a time of significant housing shortage. This clearly reveals a necessity for older adults who would like to have more manageable, downsize homes. Although, they are not available in the market.

Most of the older adults live in conventional housing, and neighbourhooods. Only the 7% live in specialist housing designed for older adults on purpose. The 75% people over 65 years old are owner –occupiers, and they prefer to stay in their own homes also in older age, and why not? Research revealed the benefits to the sense of wellbeing, autonomy and self in living in a known and familiar setting. Nevertheless, these do not support the physical and cognitive changes related to the ageing process (Torrington, 2017).

Even if people age differently, the physical and mental decline of a person is inevitable. The 45 per cent of British people over 65 years old are disabled; nearly everyone experiences some loss of mobility, and increasing difficulty in bending, stretching and weight bearing. Getting in and out of baths, walking upstairs, bending down and reaching up to cupboards and electric sockets become diffcult. On one side, some of the requirements can be met by adapting existing homes: fitting handrails, stair lifts, replacing bathrooms with wet rooms. On the other, the complete accessibilty of conventional housing could be obtained only through major interventions. The 16 per cent would need major structural alteration, and in 28 per cent of homes alteration would not be feasible as illustrated in several studies.

Besides more normal experience of sensorial declines such as sight loss and hearing impairments, dementia rate is increasing. NHS statistics indicate 64 per cent of registered blind and 66 per cent of partially sighted British people are aged 75 or over. Nearly two-thirds of people with hearing loss are 65 or over, and one in ten have profound hearing loss. At the same time, it is estimated that there will be one million people with dementia 2025. The number of people with dementia living in the community is higher than the number living in institutions; currently it is estimated that two-thirds of people with dementia live at home, around 560,000 people (Torrington, 2017).

Therefore, homes are neither designed to take account of low levels of vision and hearing nor to cope with dementia. Safety becomes a serious concern, the home becomes container of multiple hazards such as people may turn the gas cooker on and forget to light them, baths can overflow, etc. Additioanlly, the neighbourhood setting is central in the life experience of people with physical and mental impairments. Living in a supportive neighbourhood is beneficial to health, wellbeing and social connectivity. Even deprived neighbourhoods that are socially cohesive have been shown to have a

positive effect on wellbeing. Accessing neighbourhoods can be difficult or impossible if there is a lack of step-free access, ramps, handrails, seats at regular intervals, working toilets, properly maintained surfaces and removal of seasonal hazards of autumn leaves and winter ice and snow. It is also often necessary to prevent people from getting lost or walking away. In consequence their homes become their boundaries.

The market proposes specific housing designed for older people in diverse forms, offering varying levels of care, but it accommodates a relatively small percentage of older adults. If these specialist housing can be very popular among their residents, they offer a completely different setting from a familiar and informal private home. For example, most of the sheltered housing apartments have only one bedroom, so people tend to move into specialist accommodation only when their need for more support becomes imperative. Furthermore, there is also a concern on the quality of British housing stock. The lack of insulation, damp penetration, poor heating, narrow stairs, insufficent lighting impact not only on the house but also on the inabithants wellbeing. In 2012, the minimum home standards were not met by 22 per cent of homes (Torrington, 2017).

There are already less known but commercially and socially successful new exemplary models of housing for older adults. The spectrum of design guideline and experitise is wide.The policy makers have recognised and supported the need for more and better-designed age-appropriate housing in the public and the private sector. The hope is that it can be taken on board.

DL: The metabolism of our contemporary society is fast. The schools of architecture, scholars and professional are required to keep up with its social and economic challenges. Consequently, is the design sector as a whole

sensible, aware so ready to deliver new architectural and urban models for our contemporary society?

JM: The design sector is still in the process of waking up to the realities of demographic change and ageing populations. Across Europe, half the population will be over 50 by 2020. In the UK, 70 per cent of population growth over the next 25 years will be in the over-60 age group and it is predicted that half of all children born today will live to be 103. Our life expectancy at birth has increased by five years in the past 20, so more years are a given for most of us. Factors such as falling mortality rates, better diet and advances in medical science, determined a longer lifespan and should be something to celebrate. Instead we persist in seeing population ageing as a demographic time bomb, a disaster waiting to happen. Negative narratives around ageing such as the winter crisis of overflowing hospitals, the occupation of family homes, and the failure to maintain them properly are very common. Unfortunately, they mask a more complex picture. The demographic change and its impact on our future communities, neighbourhoods and homes is clear. This contemporary condition presents both challenges and opportunities for the design sector. Althrough, the current responses of the design sector tend to be shallow and not consistent. For example, older adults often spend the second half of their lives living in dilapidated family houses simply because of a lack of smaller alternatives.

Designers should answer to a wider question: how we will live those extra years most of us are now granted? Will we enjoy independence and a good quality of life? Or will we become isolated and marginalised? The phrase 'years full of life – or life full of years?' crystallised the argument and housing design is central in this argument. The built environment has generally a critical role in people lives. It affects how we work, and travel, houses, and neighbourhoods, in particular in old age.

The main issue is cultural not technical. Many are the stereotypes characterising ageing and these still persist. Consequently, the architectural community has been preferring on younger or family formation building users. In fact, this needs to be challenged if designers are to be ready for demographic change.

In this debate, I curated a pop-up exhibition held at the Design Museum in London called New Old: Designing For Our Future Selves. This showed how design could help people to lead fuller, richer, healthier lives right into old age. The exhibition revolved around six specially commissioned projects to explore the potential of new design for the old. The six projects were tangent to different facets of the design such as outdoor furniture design to help people older adults announce their place in the working world rather than retreat from view, mobility scooter to help older adults interact on the same level of their grandchildren micro-scooters, etc. Other project instead speculated about the domestic environment. On one side, the Future Faciltiy proposed a speculative project called the Amazing Apartments. In this projects, residents are turned into passive, confortable and weel served home prisioners. On the other, the Hemingway Design designed the Staiths South Bank housing estate in Gateshead. The project was grounded on the idea of taking older adults out of their homes and maximise interaction. Plenty are the opporutnities between these two extreme examples that define a conventional range: from well-established physical design strategies that encourage social interaction to new virtual technologies that can replace human contact with robots, big data and AI. Although, the future is likely to feature a combination of both types of intervention.

Growing older is not a disease that needs to be cured. Whatever way our future homes take shape, designers and architects should think beyond the medical model of ageing. Instead, designers and architects should support a "social model of ageing" (productive new connections and aspirations in later life) and even a "cultural model of

ageing" (this period of life is so unique and special that it demands particular cultural and creative attention). The "New Old" will age different from the previous generations. The "New Old" will travel, work and actively contribute for longer than any before in human history. Therefore, the demand asks for something new, and designers must be ready to propose something new.

DL: Many Western countries are widely supporting intergenerational models (i.e. intergenerational co-housing, student-senior home-sharing, etc.) (Labit and Doboust, 2016). Nevertheless, co-housing is not for everyone. In particular, in-tergenerational support is not such obvious due to its commitment of time and energy. Are these models the first step towards new architectural typologies? Could then they be adopted in different social and cultural settings?

JM: New intergenerational models can be a first step towards new architectural typologies, yes indeed. The idea of 'ant hill Britain' with three different generations sharing one dwelling can only work with truly adaptive housing stock, which the UK currently sorely lacks. The models relate to certain social contexts, but the idea of sharing space and sharing tasks to support an ageing population (older people lack capacity but have a home – younger people have the capacity and need a place to live) is more generic.

DL: Behavioural changes are inevitable. How will different social categories be affected? Will these models reduce social isolation, stigma and the detrimental health effects associated with it?

JM: People require certain behaviours related to social norms and expectations to make new architectural models such as multi-generational shared housing to work. This process is part of the human self-adjusting nature. The British population over 60 years old is currently the 24%, a number that is expected to reach the 29% by 2035, so for many old people is acceptable to believe in a long old age. The risk is linked to the physical and mental decline, which cannot translate old age into misery. Big is the number of older adults confined in indoor environments, so they become invisible.

They are also invisible in the "material culture" (Torrington, 2017). On one side, the tools, and aids that support old age are not generally found in every-day shops such as everything you need for a young child in supermarkets. They come from specialist suppliers, expert in disability accessed via health professionals. On the other hand, furnishings and equipments fitting to the needs of an ageing population can stigmatise the category. These intergenerational models might give back normality to an increasing age group.

Interviewed: Jeremy Myerson is the Helen Hamlyn Professor of Design at the Royal College of Art and a Visiting Fellow at the Oxford Institute of Population Ageing, University of Oxford. He is the curator of the Design Museum's exhibition, NEW OLD: Designing for Our Future Selves.

ETHICAL APPROVAL

Application for Ethical Approval

No research must be started without full, unconditional ethical approval. There are a number of routes for obtaining ethical approval depending on the potential participants and type of study involved – please complete the checklists below to determine which is the most appropriate route for your research study.

A. Pedagogic Research (ROUTE FOR STAFF ONLY)

To find out if your study can be conducted under the University's Code of Practice for Pedagogic Research please answer the questions below.			
1.	Is the proposed study being undertaken by a member of LJMU staff?		No
2.	Is the purpose of the study to evaluate the effectiveness of LJMU teaching and learning practices by identifying areas for improvement, piloting changes and improvements to current practices or helping students identify and work on areas for improvement in their own study practices?		No
3.	Will the study be explained to staff and students and their informed consent obtained?		No
4.	Will participants have the right to refuse to participate and to withdraw from the study?	Yes	
5.	Will the findings from the study be used **solely** for internal purposes? *e.g. there is no intention to publish or disseminate the findings in journal articles or external presentations*		No
If you have answered **Yes to all Qs1-4** your study may be eligible for consideration under the University's Code of Practice for Pedagogic Research. You should **not** complete this application form but seek further guidance at http://www2.ljmu.ac.uk/RGSO/114123.htm or by contacting Dave Harriss D.Harriss@ljmu.ac.uk.			
If you have answered **No to any of Qs1-4** you should complete the checklists below to determine which route you should use to apply for ethical approval of your study.			

B. National Research Ethics Service (NRES)

To find out if your study requires ethical approval through NRES answer the questions below. Does you study:			
1.	Involve access to NHS patients or their data, or involve participants identified from, or because of, their past or present use of NHS services?		No
2.	Include adults who lack capacity to consent as research participants?		No
3.	Involve the collection and/or use of human tissue as defined by the Human Tissue Act 2004? **		No
If you have answered **Yes to any of Qs1-3** you should **not** complete this application form. You must seek approval for your study through the NHS National Research Ethics Service (NRES). For further information and details of how to apply to NRES can be found at http://www.nres.nhs.uk/ *Please note that once ethical approval has been received from NRES a completed LJMU Research Governance Proforma must be submitted to LJMU REC with written evidence of full, unconditional ethical approval from NRES prior to commencing their research.*			
If you have answered **No to Qs1-3** complete the checklist below to determine whether your			

	application is eligible for proportionate review or if a full review by the University's REC is required.
	** *Studies involving the use of human tissue from healthy volunteers which are taking place within the University's Research Institute for Sports and Exercise Sciences (RISES) can apply for approval through the University REC (for further information contact Dave Harriss: D.Harriss@ljmu.ac.uk)*

C. Full versus Proportionate Review

Does the proposed study:			
1.	Expose participants to high levels of risk, or levels of risks beyond those which the participant is likely to experience whilst participating in their everyday activities? These risks may be psychological, physical, social, economic, cause legal harm or devalue a person's self-worth. *e.g. untrained volunteers exposed to high levels of physical exertion; participants purposefully exposed to stressful situations; research where participants are persuaded to reveal information which they would not otherwise disclose in the course of everyday life.*		No
2.	Involve the administration of drugs, medicines or nutritional supplements as part of the research design?		No
3.	Include adults who may be classed as vulnerable? *e.g. adults with learning disabilities or mental illness; drug/substance users; young offenders; prisoners/probationers; those in a dependent relationship with the researcher*	Yes	
4.	Include children or young adults (below 18) where parental consent will not be sought?		No
5.	Involve the discussion or disclosure of topics which participants might find sensitive or distressing? *e.g. sexual activity; criminal activity; drug use; mental health; previous traumatic experiences; illness; bereavement*		No
6.	Use questionnaires which focus on highly sensitive areas? *e.g. illegal activity; criminal activity; disclosure and analysis of findings based on sensitive personal information as defined by Data Protection Act e.g. racial or ethnic origin; political opinions; religious beliefs; trade union membership; physical or mental health; sexual life*		No
7.	Incorporate interviews or focus groups which involve the discussion of highly sensitive areas? *e.g. illegal activity; criminal activity; disclosure and analysis of findings based on sensitive personal information as defined by Data Protection Act e.g. racial or ethnic origin; political opinions; religious beliefs; trade union membership; physical or mental health; sexual life*		No
8.	For research accessing and analysing existing datasets. Will the dataset include information which would allow the identification of individual participants?	No	
9.	Involve deliberately misleading participants in any way?		No
10.	Involve recruiting participants who have not been provided with a participant information sheet and asked to sign a consent form? *Please note that for questionnaire based studies a consent form is generally not request as consent is implied by the completion of the questionnaire. Applicants conducting **questionnaire-only** studies should answer NO*		No
11.	Involve the collection and/or use of human tissue from healthy volunteers? *Under these circumstances human tissue is as defined by the Human Tissue Act 2004 - "Any, and all, constituent part/s of the human body formed by cells."*		No

Version 9 – July 2015

	Research studies involving the use of plasma or serum are not covered by the HTA.		
12.	Involve high levels of risks to the researcher? *e.g. lone working at night; interviewing in your own or participants homes, observation in potentially volatile or sensitive situations*		No

If you have answered **No to all Qs1-12** your study is eligible for proportionate review. You should complete the following application form and submit it electronically with any supporting documentation e.g. participant information sheets, recruitment letters, consent forms to **EthicsPR@ljmu.ac.uk** . Your application will be reviewed by a sub-committee of the University REC and you will be informed of the outcome within 2 weeks. Please note that if the allocated reviewer finds that your application has been wrongly submitted for proportionate review you will be notified and your application will be forwarded for consideration at the next University REC.

If you have answered **Yes to any of Qs1-12** your study is not eligible for proportionate review and will be considered at the next meeting of the University REC. You should complete the following application form and submit it electronically with any supporting documentation e.g. participant information sheets, recruitment letters, consent forms to **researchethics@ljmu.ac.uk** .

Please note that applications involving the use of human tissue originating from the School of Sports and Exercise Science should complete the Research Ethics Application Form for Studies Involving the Use of Human Tissue available at http://ljmu.ac.uk/RGSO/93044.htm

Guidance on completing the LJMU REC application form can be found at
http://ljmu.ac.uk/RGSO/93044.htm

Please note that following submission of your application to the relevant email address a signed copy of the application's signature page only must be sent to the Research Ethics Administrator, Research and Innovation Services, 4th Floor Kingsway House, Hatton Garden.

Visit http://ljmu.ac.uk/RGSO/93126.htm for REC submission and meeting dates.

Where teaching practices involve invasive (psychological or physiological) procedures on students or others staff should refer to the guidance provided at http://ljmu.ac.uk/RGSO/93087.htm regarding the development of departmental/faculty codes of practice.

Research Mode

Undergraduate – specify course

Postgraduate

	MRes
	MPhil
x	PhD
	Prof Doc e.g. EdD or DBA
	Other taught Masters programme – specify course

	Postdoctoral
	Staff project
	Other – please specify

Has this application previously been submitted to the University REC for review? – **No**

If yes please state the original REC Ref Number

SECTION A – THE APPLICANT

A1. Title of the Research

THINKING, MAKING AND LIVING: ARCHITECTURE AND URBANISM IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION OF DEMENTIA FRIENDLY ENVIRONMENTS.

A2. Principal Investigator (PI) *(Note that the in the case of postgraduate or undergraduate research the student is designated the PI. For research undertaken by staff inclusive of postdoctoral researchers and research assistants the staff member conducting the research is designated the PI.)*

Title *Mr*   Forename *Davide*   Surname *Landi*

Post   Phd student/Post graduate researcher

School / Faculty   School of Art and Design

Email   D.Landi@2016.ljmu.ac.uk   Telephone   07491798941

Relevant experience / Qualifications

Master of Architecture from the Accademia Adrianea di Architettura e Archeologia
Master of Architectural Engineering from the Universita' Politecnica delle Marche
Post graduate researcher who was awarded of the full funded scholarship by the LJMU. Moreover, he is Italian architect who have been working in different countries like Japan, China, Italy and United Kingdom. Alongside his professional experiences, he obtained his degree in architectural engineering from the Università Politecnica delle Marche.
Furthermore, his proficiency in architectural design was improved with a second Master degree in "architecture, archaeology and museum design innovative design and management of archaeological heritage".

Version 9 – July 2015

5

His abilities were especially valuable in "the 10th international seminar and competition of museum design at Hadrian's villa, Gianbattista Piranesi," where his international team and he won a special mention, "the plan award: future projects 2015, category culture," where his team and he were shortlisted member of that international competition and "Perugia in Centro: temporary structures for exhibitions and markets," where he won a special mention as the most innovative project in that national competition.

A3. Co-applicants *(including student supervisors)*

Co-applicant 1 / Academic Supervisor 1*(where the application is being submitted by a student, either undergraduate or postgraduate, details of their main dissertation supervisor must be included. The form must be submitted with a letter or email from their named supervisor indicating that they have read the application and are willing to supervisor the student undertaking the proposed study – STUDENT APPLICATIONS WILL NOT BE REVIEWED UNTIL NOTIFICATION OF REVIEW BY THE NAMED SUPERVISOR IS RECEIVED*

Title *Dr* Forename *Robert* Surname *MacDonald*

Post Senior Reader in Architecture at LJMU School of art and design

Department / School / Faculty School of Art and Design

Email R.G.MacDonald@ljmu.ac.uk Telephone 0151 231 3710

Relevant experience / Qualifications

President Emeritus Liverpool Architectural Society, WAN World Architecture News Health Care Judge (2010), Roscoe Citizenship Award (2014) for Life Long Services to Mental Health presented by Lord David Alton & Professor Nigel Weatherill VC. Rob was appointed Ambassador for Conferences by Club Liverpool in (2015).
Since 1989 Rob has been The Reader in Architecture at Liverpool John Moores University and his research focuses on Therapeutic Environments, Architecture for Good Mental Health and Well Being, Design for Dementia including a book chapter on "Dementia and The Environment". He has published in "The Design for Mental Health Journal" about a new Prescription for Psychiatry and The Book "DIY Integrated City".
Recently he was funded by The University to visit The Royal College of Surgeons, Physik Garden, Welcome Foundation Library, Finsbury Health Centre, Peckham Pioneering Health Centre and The Maggies Cancer Care Building at Charing Cross.
Rob was appointed a Design Champion and Service User for MerseyCare NHS Trust and a member of The Performance and Investment Committee (PIC) after being warmly welcomed by the service users, carers and The None Executive Chairman.

Co-applicant 2 / Academic Supervisor 2

Title *Mr* Forename *Grahame* Surname *Smith*

Post Subject Head for Allied Health at the School of Nursing and Allied Health

Department / School / Faculty Nursing and Allied Health

Email g.m.smith@ljmu.ac.uk Telephone 0151 231 4115

Relevant experience / Qualifications

Registered Mental Health
Nurse NMC Teacher
Senior Fellow - HEA
Diploma Health & Social Welfare
BSc (Hons) Applied Psychology
BA Open Studies (Philosophy & Health)
PGCE PG Dip Nursing
MEd MA Philosophy & Ethics in Mental Health
He is an experienced mental health nurse and an academic, currently he is the Subject Head for Allied Health at the School of Nursing and Allied Health. He is also the centre lead for the centre for collaborative innovation in dementia which is an accredited Living lab (European Network of Living Labs). He continues to practice, research and publish within the mental health nursing field, his specific interests include living well with dementia, descriptive psychopathology, and pragmatic philosophy as an ethical approach and as a research-to-innovation methodology (living lab). He is the editor/author of a number of mental health nursing texts and an Advisory Board Member on the Working Papers in the Health Sciences E-Journal. As an educational professional He is a NMC teacher, a Senior Fellow of the Higher Education Academy, and a NMC reviewer (pre-registration mental health nursing programmes). He continues to maintain my clinical skills through his work with a local mental health NHS Trust, He also works with people living with dementia through his role as the lead for the centre in collaborative innovation in dementia. His teaching interests include; pre-registration mental health nursing; post-registration & post-graduate programmes (specifically mental health ethics; leadership ethics; personality disorders; dementia and descriptive psychopathology).

Co-applicant 3 / Academic Supervisor 3

Title _Mrs_ Forename _Anne Denise_ Surname _Parker_

Post Senior Lecturer at the School Nursing and Allied Health

Department / School / Faculty   Nursing and Allied Health

Email A.D.Parker1@ljmu.ac.uk   Telephone 0151 231 4340

Relevant experience / Qualifications

Registered Mental Nurse
MSc Health Promotion (Research and Policy Change)
BA Health Studies / Health Promotion
Working   in the Centre of Collaborative Innovations in Dementia at LJMU
Working on the European Innovate Dementia Project.
Since qualifying in 1986 as a mental health nurse, she has thoroughly enjoyed her nursing career. It has given her experience in working in a wide variety of mental health settings, in the NHS, the private and charity sector. This includes working with older people (in-patient setting, nursing home, day hospital and community, and in the European 'Innovate Dementia' project). She has also worked in acute psychiatry in-patient and community setting (she spent many years as a community mental health nurse, culminating in being deputy manager of a CMHT). Other experience has been in continuing care/rehabilitation and addictions. She has been at LJMU since 2005. She has always been passionate about mental health care and education. She was involved in a European dementia project 'Innovate Dementia' from 2012 until 2015. She is involved in clinical practice in a community mental health team for older adults. She is also involved in raising awareness around the needs of young adults with life limiting, life threatening and palliative care needs. She has an interest also in environmental design to enhance health and wellbeing.

SECTION B – PROJECT DETAILS

B1. Proposed Date for Commencement of Participant Recruitment *(Please enter the date when you propose to start recruiting participants – note that no recruitment can take place without full, unconditional ethical approval)*

Start Date | **28th of February 2017**

B2. Scientific Justification. State the background and why this is an important area for research *(Note this must be completed in language comprehensible to a lay person. Do not simply refer to the protocol. Maximum length – 1 side of A4)*

Studies have been showing a worldwide tendency: population is ageing so if architecture means designing buildings, facilities, infrastructures, etc. where people gather and experience them, it must accommodate people of different ages.

Furthermore, UN data report that population ageing is increasing rapidly. Today the 11 % of the world's population is over 60 years and by 2050 people aged over 60 will account for 22%. Along with those statistics this will increase the number of human beings living with dementia. In fact, in 2013 35,6 million were affected of dementia pathologies and this number will be double in 2030 and triple in 2050. Therefore, it will represent an unbearable economic and social cost.

In 2014, the "Progetto Leonardo" scholarship allowed my team and myself to join LJMU, study and work on a comparative analysis between the Italian and British care systems, focusing on dementia. As a result, it was possible to understand that the two care system cores are completely different and characterized by diverse subjects, social and economic costs. Additionally, the dementia friendly design follows different theories and studies in order to respond to socio-cultural behaviours and activity requirements. Consequently, if we conceive architecture as able and duty bound to translate those behavioural needs in spaces, what if we will extend the boundaries of that analysis?

In literature, it is possible to find several definitions regarding a dementia friendly design at different scales (dwellings, offices, dementia wards in hospitals, neighbourhoods and cities) such as *Halsall and Macdonald (2015)*, or *S. Handler (2014)*. On the other hand, design guidelines are found in regulations such as the *London housing Design guide and D. Utton (2013)*. This literature has mainly been produced in the UK and there is little awareness of global architectural solutions. The PhD will therefore consider if design models available in literature are applicable in different social, economic and environmental contexts.

Moreover, in this particular historical, social and economic moment which has brought to light a new stage of life defined as Third Age (*P. Laslett, 1989*) or Young-old (*B. L. Neugarten, 1974*) where people increasingly present dementia symptoms or other impairments but still want to keep their own lifestyles. Are those design models/strategies able to socially and economically include the Young-old in a contemporary society?

On the other hand, some architecture will fail objective scrutiny against the received wisdom of more liveable architecture and many designs which embody a focused response to the requirements of organic mental illness lack the sense of spatial control and aesthetic consistency expressed in the discourse surrounding high architecture. Is it possible to get an optimum expression of those two aspects in different social, economic and environmental contexts?

Currently, there has been relatively sparse and fragmentary written material in journals, articles and books regarding design strategies at different scales which are facing the ageing population issue with a particular attention to the cultural, social and economic perspective. One key piece of literature by *Deane Simpson, Young Old: Urban Utopias* of an ageing society published in 2015 documents and constructs a provisional theory of this experimental field of urbanism that has emerged from the specific and often overlooked socio-demographic milieu represented by the Young-old *(D. Simpson, 2015)*.

The study will be conducted with the intention to fill the gaps identified and provide academic contribution to this field of research and will aim to explore how architecture at different scales work within a specific cultural, social and economic context.

This is an important area for research for several reasons:
- The uniqueness of the project, for elderly people, people living with dementia and professionals in developing a tailored methodology that will be used by the chief investigator in analysing architectures designed and used by them.

Version 9 – July 2015

- The data that we would be able to collect for research purposes to add to the evidence base.
- The chance to explore assumptions that are made about people living with dementia and their ability to be active actors in the contemporary society.
- Data gathered will inform future development in this area.

B3. Give a summary of the purpose, design and methodology of the planned research
(Note this must be completed in language comprehensible to a lay person. Do not simply refer to the protocol. Maximum length – 1 side of A4)

Purpose:
The aims of the international investigation of aged-people friendly environments with a particular attention on dementia pathologies and requirements are to:
• Evaluate how innovative architectural design approaches are utilised in Europe and Overseas highlighting best practice and future areas of research and development;
• Understand how cultural, social and economic factors influence those architectural design approaches;
• Create collaborations that bring people living with dementia, together with health and social care, academia and businesses. This 'triple helix' approach is to share and enhance each other's knowledge, expertise and performance;
• Compile an International Illustrated guidebook (with an additional web site) of Dementia Friendly Environments in different social and cultural contexts.
Architect and urban designers together with facility users and caregivers are the core of a bottom up approach where they have a central role on the comprehension, evaluation and improvement of design standards for dementia friendly environments. Additionally, according to the Mental Capacity Act (2005) decision capacity is assessed in old-adults (participants) who might present mild to moderate dementia by a local care giver or a local mental health practitioner.
A part of the planned qualitative analysis is to gather data concerning the design experience - the thinking phase of a design practice. This evidence will inform the evidence base of design for a new social category: aged people.

Design and Methodology:
This qualitative evaluation will explore the benefits of people living with dementia in aged-people friendly environments at different architectural scales.
The research methodology starts from an analytical approach based on literature studies in order to establish a background in: contemporary social and economic challenges focusing on the ageing population issue and design for dementia at different scales.
Furthermore, the second stage of the research is characterized by a post-occupancy analysis of lifelong architectures and more liveable cities. Moreover, it has been developed through a triple helix approach where institutions like the LJMU School of Art and Design, the Dementia Action Alliance and the Service Users Reference Forum, professionals and people/users work in partnership to co-innovate and solve shared social challenges. It reflects the idea of an architecture centred on people where they are fundamental in an appraisal and improvement of design standards for more liveable cities and lifelong architectures.
Additionally, the methodology draws inspiration from the design process of architectural practices where it is possible to define three different phases: the thinking of an architecture, the making of an architecture and the living of an architecture so through the same logic we want to analyse the proposed case studies:
_ The thinking phase is based on a publications analysis (books, websites, articles, etc.) linked to a specific project. It is integrated with architectural office interviews in order to comprehend the practice design thinking/ritual and a

critical architectural assessment done directly by the chief investigator.

_ The Making phase is based on architectural tools analysis (plans, section, renders, pictures, etc.) which the analysed architectural firm used as expression of its design approach. Obviously, that evaluation will be objectively done by a comparison with dementia friendly standards which are available in literature and regulations.

_The living phase is based on a direct contact with architectural structures: users, workers and managers.

Data Collection:
The researcher approaches the volunteers in two different manners:

_ direct relationship with participants and direct submission of questionnaires (through the facility's staff members and care givers).

_ supported by a gatekeeper (a local caregiver or a local mental health practitioner). The gatekeeper advises the researcher on what the volunteers' (in case of old-adult people who might present with mild to moderate dementia) wishes and feelings would be if they were able to consent for themselves, and on whether they should take part. The gatekeeper does not give consent, only advice. The responsibility to decide whether the participant should be entered into the research lies ultimately with the chief investigator who tests participants' mental capacity according to the Mental Capacity Act (2005).

In particular, the starting assumption of the researcher is that a person has the capacity to make a decision but it is assessed through a two-stage test based on the following questions:

_ Does the person have an impairment of the mind or brain, or is there some sort of disorder affecting the way their mind or brain works? (It doesn't matter whether the impairment or disturbance is temporary or permanent).

_ If so, does that impairment or disturbance mean that the person is unable to make the decision in question at the time it needs to be made?

Therefore, the practical steps are:

1. The researcher asks for valuable background information (i.e. the person's past behaviour and abilities and the types of decisions they can currently make, etc.) to the gatekeeper who is a local caregivers or a local mental health practitioner so aware of patients or facility users' personal background. According to ethical codes and laws that require professionals to keep personal information confidential, the gatekeeper must obtain volunteers' consent before reveling their information to the chief investigator.

2. In an introductory meeting, the researcher and the gatekeeper (a local caregiver or a local mental health practitioner) explain, through a very simple language, to volunteers all the relevant information to the decision such as:
   _ the aim of the research;
   _ what participants have to do if they take part;
   _ the possibility to withdraw at any time;
   _ the fact that there are no related risks to the study.

3. After few minutes, the chief investigator checks the participants' understanding by asking few questions (avoiding yes or no questions because they are not enough to assess the person's capacity to make a decision) and a rough explanation of the study.

If the volunteers positively respond to the mental capacity assessment, the researcher allow them to take part to the study otherwise they are excluded.

In addition to any introductory meeting, additional information regarding the research can be found in the proper information documents such as the consent form and participant information form.

As best practice, the completed questionnaires are collected by the researcher. Only if participants need more than one day for the questionnaire's completion and the chief investigator has only one day for the facility's visit due to geographical distances between the researcher based in Liverpool and a building subject to the study (i.e. a nursing home in London) that create economic and time constrains, the researcher provides stamped addressed envelopes to the participants. Once the questionnaires are completed and sealed in the provided stamped addressed envelopes, the gatekeeper collects and sends them back to the chief investigator by post.

Lastly, the related confidentiality issues are addressed by:

_anonymizing the questionnaires right after they have been given to the participants (older adults who might

present mild to moderate dementia) who preserve the possibility and the right of withdrawing from the study at any moment as requested by the Section 33 of the Mental capacity act (2005);
_ using anonymous questionnaires with the facility's staff members and care givers;
_providing anonymous stamped addressed envelopes;
_involving the gatekeeper in the collection of the sealed and stamped addressed envelopes containing the completed questionnaires because some of the participants are older-adults who might have difficulties in posting a mail which is a factor for their identification.

Moreover, the loss of questionnaires in the post does not matters in terms of confidentiality issues because they are already anonymous or anonymised.

The collected data which are stored in a password protected workstation and a locked cupboard are used by the chief investigator and his supervisors.
It will be explained to the participants in the participant information sheet and again at the beginning of each individual or group introductory meeting that the aim of the evaluation is to understand the benefits of living in a facility for elderly also in case of early stages of dementia and their carers.
Broad areas have been selected to evaluate the benefits of the living and working in an aged-people friendly environment:
• 	Efficiency of the architectural design.
• 	Health and wellbeing.
• 	Social and Economic Inclusiveness within communities.

(see appendix for questionnaires)

Although the analysis starts with an in depth study of the available literature, it is imperative that we gain a better understanding of the experience of people living with dementia, their carers and professionals involved in this process. The evaluation will help to provide qualitative data of the benefits of dementia friendly environments related to the possibility of ageing in place. These environments represent the medium to help people living with dementia and their carers, and, for example contribute to independence.

Samples:
1 or 2 users between 55 -75 years old with full mental capability but might present early stages of dementia and 1-2 care facility' employees or managers if present in the case study (it depends on buildings' typologies). Therefore, the 55 -75 years old volunteers might be supported by personal carers in order to create a more comfortable environment.

Even if the debate remains lively today, medical literature decouples normal ageing which includes senile dementia pathologies from brain pathologies *(Lawrence and Leibing ed., 2006)*. For example, some of the behavioural symptoms of Alzheimer's can be found in normal, healthy older person *(Drachman 1983, Goodwin 1991, Gubrium 1986)*. Moreover, physical diseases arise from localized changes in the body which might create physical malfunctions but the person is able to keep almost the precedent lifestyle, the same is for senile dementia which locally alters the brain but mental abilities are still preserved. Consequently, elderly who present early stages of senile dementia might show disorientation or forgetfulness symptoms but their decisional capacity is not altered as any other healthy old people and they can still live a normal life with just few additional attentions given by their life-partners or relatives such as attendants of the Service User Reference Forum in Liverpool. That is why the NHS does not include dementia pathologies in the Mental health diseases category but treats them as two separate groups.

Case studies:
As defined by Thomas (2011) case studies are analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically by one or more method. In this research, case studies are represented by different building typologies that provide various services such as: housing complexes, day-care centres and retirement homes with different type of users (elderly individuals and elderly with mild moderate dementia) who take part to the questionnaire. Therefore, the case studies' analysis produces an evidence base research.

> *Analysis:*
> Analysis will focus on users' and employees' (if present in a specific case study) experiences in order to comprehend how the case studies' design has been affecting their lifestyles and working habits. Consequently, the chief investigator will write reports integrated with key publications and literature that analyse the process which has driven to specific design solution. Software which will be used are: Microsoft Words, Adobe Indesign and Adobe Illustrator. Lastly, the written report is evaluated by a supervisory relationship that will help the researcher in terms of monitoring. The chief investigator is supported by the academic supervisor and the other members of the team with weekly meetings.
>
> *Proposed timescale:*
> September 2016 - January 2016: Methodology development and improvement.
> February 2017 – March 2019: post-occupancy analysis

B4. State the principal research question

> <mark>How does the existing built environment affect on older adults who might present mild to moderate dementia's daily activities?</mark>

B5a. Give details of the proposed intervention(s) or procedure(s) and the groups of people involved (*including psychological or physical interventions, interviews, observations or questionnaires)*

Procedure or Intervention	Participants	Number of participants	No. of procedures per participant	Avg. Time to complete
E.g. Interview	*E.g. LJMU staff/students, general public, service users, professionals*	*25*	*1*	*1 hour*
Questionnaires	*Building's users: older-adults and older-adults with mild to moderate dementia*	*28 (2 per case study)*	*1*	*20 minutes*
Questionnaires	*Caregivers and Managers (if present in the typology of a case study)*	*28 (2 per case study)*	*1*	*15-18 minutes*

To include additional interventions place your mouse cursor in the last cell of the final column and press the tab button on your keyboard. A new row will be created for the above table.

B5b. Where questionnaires are to be used have these previously been validated?

[ ] **Yes**   [x] **No**   [ ] **Not Applicable**

*If yes, state by whom and when. If no, you **must** append copies of the proposed questionnaire (s) to this application.*

> Appended.

B5c. Where interviews or focus groups (structured or semi-structured) are proposed you must append an outline of the questions you are going to ask your participants. Please confirm that you have attached an outline of your interview / focus group questions.

[ ] **Yes**   [x] **Not Applicable**

B6. How will the findings of the research be disseminated?*(e.g. thesis, dissertation, peer-reviewed articles, conference presentations, reports)*

Peer review articles, conference presentations, reports, guide book.

SECTION C – THE PARTICIPANTS

C1. How will the participants been selected, approached and recruited? If participants are to be approached by letter/email please append a copy of the letter/email. Please include details on how much time participants will have to decide if they want to take part. *(where different groups of participants have been identified in section B5a above provide details on how each group will be selected, approached and recruited.)*

The chief investigator will contact the Head Office of a facility which will become the case study. Contact will be made by email or phone call so that the researcher will be able to give an introduction to himself, to ask for the availability of a gatekeeper and to arrange a visit date to the building. The email or phone call will include a simple, brief description of the research, academic references and the researcher's CV, information and contacts. Moreover, this visit or phone call will be done at least one week before the main research-gathering visit.

On the day of the visit to the building, the researcher will meet the gatekeeper (a local care giver or mental health practitioner) so there will be a preliminary informal meeting between the chief investigator and a gatekeeper. Together they will read and understand the participation information sheets and clarify all doubts. At the end of this first meeting, the gatekeeper will decide whether or not to take part in investigation. If the gatekeeper voluntarily decides to be part of the qualitative analysis he or she will have to sign the consent forms. A copy will be left to him/her and one copy taken by the researcher.

Subsequently, the chief investigator will go with the gatekeeper through a case study's visit (it will take around 2 or 3 hours). During the tour, the researcher, as best practice, will select 4 questionnaires' participants: 2 of the facility's staff members (for example a care giver and a manager) and 2 facility's residents. In particular, the gatekeeper, being aware of facility's users' mental capacity, will support the chief investigator in their selection process.

At end of the visit to the building, and after questionnaire's participants' mental capacity assessment by the researcher advised by the gatekeeper who is a care giver or local mental health practitioner (it could possibly be an occupational therapist or psychologist) in accordance with the Mental Capacity Act (2005), there will be an introductory meeting between the researcher, the gatekeeper and each of the volunteers where all together will read and understand the participants' information sheet and answer all participants' questions. At the end of those meetings, all the volunteers will have to decide whether or not to join in with the study. Only if they voluntarily choose to take part to the research, the chief investigator will ask them to sign the consent form and a copy of the PIS and CF will be left to the participants. (Appended you will find the risk assessment form).

Furthermore, all of the participants will have up to one week to answer the questionnaire which will ensure that they all have a full understanding of the study and questions.

However, if an interested building (case study) does not have a head office or public relations office to contact by email or phone call, the researcher will go\visit directly to the facility in order to arrange its visit and to ask for the availability of a gatekeeper.

Version 9 – July 2015

13

In all of the cases, if the volunteers will immediately accept to take part and to answer to the questionnaire as a verbal process, the timing will be shorter than if they undertake the written questionnaire.

The questionnaire for the facility users is made of 15 questions (11 yes or no questions and 4 open questions) and takes around 25 minutes. The questionnaire of workers is made of 9 questions (2 yes or no questions and 7 open questions) and takes 16 minutes. The questionnaire of mangers is made of 8 questions (1 yes or no question and 7 open questions) and takes 15 minutes. The whole procedure from the presentation, the decision to the collections takes a maximum of 7 days.

C2. How was the number of participants decided? *(e.g. was a sample size calculation performed)*

After analysing published papers regarding one-time post occupancy evaluation, supervisory team meetings, study of the typology of the qualitative analysis and the nature of the questionnaire, the number of samples was decided in order to not be invasive within a living and working environment and to obtain an objective evaluation by listening to different users and carers feedbacks.

C3a. Will any of the participants come from any of the following groups? (Please tick all that apply)
Please note that the Mental Capacity Act 2005 requires that all research involving participation of any adult who lacks the capacity to consent through learning difficulties, brain injury or mental health problems be reviewed by an ethics committee operating under the National Research Ethics Service (NRES). For further information please see
http://www.ljmu.ac.uk/RGSO/101579.htm

	Children under 16
	Adults with learning disabilities
x	Adults with mental illness (if yes please specify type of illness below)

Mild to moderate dementia.

	Drug / Substance users
	Young offenders
	Those with a dependant relationship with the investigator *e.g. your employees or students*
	Other vulnerable groups please specify

Justify their inclusion

The questionnaire is specifically designed for elderly people living with mild to moderate dementia but still have their mental capacity assessed by a gatekeeper (a care giver, local health or mental health practitioner) in accordance with the Mental Capacity Act (2005) which will allow them to have a full comprehension of the research and questionnaire and their carers. Together, carers and older-adults have been experiencing what does it mean to be living well in elderly and dementia friendly environments. Therefore, they have a normal life with some additional support given by their relatives and life-partners such as members of the Liverpool Service User Reference Forum.

C3b. If you are proposing to undertake a research study involving interaction with children or vulnerable adults do you have current, valid clearance from the UK Disclosure and Barring Service (DBS)?

	Yes		No	x	Not Applicable

Version 9 – July 2015

14

548

C4a. What are the inclusion criteria? *(Please include information on how you will ensure that your participants will be informed of your inclusion criteria and how you will ensure that any specific inclusion criteria are met)*

_ age 55 - 75 years old.
_ facility users present early stages of dementia pathologies but with a mental capacity, assessed by a gatekeeper who is a care giver, local health or mental health practitioner, which will allow them to have a full comprehension of the study and questionnaire in accordance with the Mental Capacity Act (2005).
_ facility users with full mental capacity and workers.
_ gatekeepers must speak English, native or bilingual.
_ gatekeepers or participants are able to use a computer and a scanner.

C4b. What are the exclusion criteria? *(Please include information on how you will ensure that your participants will be informed of your exclusion criteria and how you will ensure that any specific exclusion criteria are met)*

_ age under 55 years old.
_ age over 75 years old.
_ facility users with a lack of mental capacity.
_ workers not interested in taking part to the research.
_ facility users' mental capacity lack evaluated through a gatekeeper
_ facility users who will present as experiencing sudden cognitive decline or distress they will be excluded from the evaluation and signposted to the appropriate support and advice services or GP.
_ non- English speaker gatekeeper.
_ gatekeepers who is not able to use a computer and a scanner.

C5. Will any payments/rewards or out of pocket expenses be made to participants?

☐ **Yes**   x **No**

If yes what or how much?

SECTION D – CONSENT

D1. Will informed consent be obtained from (please tick all that apply)

x	**The research participants?**
	The research participants' carers or guardians?
x	**Gatekeepers to the research participants?** *(i.e. school authorities, treatment service providers)*

D2. Will a signed record of consent be obtained? *Please note that where the study involves the administration of a questionnaire or survey a signed record of consent is not required for completion of the questionnaire as long as it is made clear in the information sheet that completion of the questionnaire is voluntary. Under these circumstances return of the completed questionnaire is taken as implied consent.*

If implied consent is to be assumed by return of questionnaires, the following statement (or similar) must be used:

"I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of this research study and for my data to be used as described in the information sheet provided"

Participation in any other interventions within the same study e.g. interviews, focus groups must be supported by obtaining appropriate written consent.

| x | Yes | | No | | Implied consent for questionnaire | | Verbal consent |

Where the study involves the use of more than one intervention for example interviews and a questionnaire please the space below to detail the method of consent to be used for each intervention eg
Questionnaire – implied consent
Interview – written consent
Telephone interview – verbal consent

PLEASE APPEND COPIES OF ANY PROPOSED CONSENT FORMS TO THIS APPLICATION

D3. All participants must be provided with written information detailing the purpose, procedures, risks and benefits of participating. An approved template for the participant information sheet can be found at http://ljmu.ac.uk/RGSO/93717.htm. Please check the box below to confirm that a participant information sheet has been appended to this application. | x |

APPLICATIONS SUBMITTED WITHOUT A PARTICIPANT INFORMATION SHEET WILL NOT BE REVIEWED.

D4a. Will participants be able to withhold consent (refuse to take part)?

x	Yes		No
If no please explain why not			

D4b. Will participants be able to withdraw from the study whilst it is ongoing (after they have consented to take part)?

x	Yes		No
If no please explain why not			

D4c. Will participants be able to withdraw from the study after data collection has ended (will it be possible to identify and remove an individual's data once it has been collected or has been collected anonymously)?

x	Yes		No
If no please explain why not			

THE ABILITY OF PARTICIPANTS TO REFUSE TO TAKE PART OR TO WITHDRAW FROM A STUDY MUST BE MADE CLEAR IN THE WRITTEN INFORMATION PROVIDED TO PARTICIPANTS

Version 9 – July 2015

16

SECTION E - RISKS AND BENEFITS

E1. Where will the intervention(s) take place? *Please note that where research is to be conducted in participants' homes or other non-public places applicants must be aware of appropriate lone working policies / practices and complete a full risk assessment.*
Applicants should also be aware of potential embarrassment or distress for participants in asking them to discuss personal or sensitive topics in public places.

	LJMU premises		NHS or other external organisations	x	Public places	x	Participant homes or other non-public places

E2. Will individual or group interviews/questionnaires discuss any topics or issues that might be sensitive, embarrassing or upsetting or is it possible that criminal or other disclosures requiring action could take place during the study? (e.g. during interviews or focus groups)

x	Yes		No		Not Applicable

If yes give details of procedures in place to deal with these issues. Information given to participants should make it clear under what circumstances action may be taken. Where interviews or questionnaires discuss sensitive or distressing topics signposting to relevant support organisations must be included in the associated participant information sheet.

The questionnaire focuses on non-sensitive topics but some of the participants' answers might be very negative which might make them realise how unhappy they are. If necessary participants will be signposted to their specialist mental health team, GP or local dementia advice centre. The signposting to local support services will be provided on the participant information sheet and the questionnaire.

E3. Explain any potential benefits for individual participants of the study. Where there are no benefits to individual participants provide brief details of the potential broader benefits of the study for example to society or to future service users.

While there is no direct benefit to participation, this group of people with dementia will experience considerable personal and social reward from a bottom up approach where they have a central role on an evaluation and improvement of design standards for dementia friendly environments.

Version 9 – July 2015

17

E4. Describe in detail any potential adverse effects, risks or hazards (mild, moderate, high or severe) of involvement in the research for the RESEARCHERS. *Explain any risk management procedures which will be put in place e.g. lone working procedures, counselling, peer support.*

A Potential risk is distress symptoms following to:
_a not proper planning of meetings with participants (mild).
_lack of time and interaction availability of participants (mild).
_a strictly formal meeting between the researcher and participants (mild).
_misunderstandings of the research purpose and development so a not remunerative, in term of contents, collaboration (mild).
_language misunderstandings (mild).
_label presentation as advocate of this particular aspect of architecture (mild).
_not relevant experience in interacting with people affected by dementia pathologies that might be presented by day care centres and retirement homes' users (mild).

Therefore, a proper planning of the meeting as described before will have a fundamental role in building a fruitful collaboration between the chief investigator, participants and gatekeepers.

In case of particular needs or impairments, meetings will be placed in public informal places such as café.

Lastly, gatekeepers must be bilingual or native English speaker if it not possible the chief investigator will be supported by an interpreter in order to translate all the documents (CF, PIS, explanatory letters and Questionnaire).

SECTION F – DATA ACCESS AND STORAGE

F1.Personal Data Management

Will the study involve the collection and storage of personal, identifiable or sensitive information from participants? Please note that signed consent forms constitute personal data. *(e.g. names, addresses, telephone numbers, date of birth, full postcode, medical records, academic records)*

| x | Yes | | No |

If yes please provide details of what personal information will be collected and stored

Consent forms will be stored in locked filing cabinets in DL's office.
Questionnaire data will be immediately transferred to a password protected PC in DL's office.
Additionally:
_ in case of participants who are old - adults with mild to moderate dementia, questionnaires are anonymised immediately after they have been given to the participants through a personal identification code made of a letter and a number so that participants' identity is protected and they have the possibility of withdraw at any time as requested by the Section 33 of the Mental capacity act (2005);
_in case of participants who are facility's staff members and care givers, questionnaires are anonymous.

The list of their names and personal identification codes on will be stored in a locked filing cabinets in DL's office.

*Applicants should note that personal identifiable information or sensitive information relating to participants **must not** be transferred in or out of the EEA without the explicit consent of participants. Such information must be handled with great care and only used in the way described in the written information you give your participants.*

Version 9 – July 2015

18

*You **must** store any hard copies of personal date (e.g. printed data sheets, signed consent forms) in locked cupboards or filing cabinets and any electronic data containing personal information **must** be stored securely on LJMU password protected computers.*
*Personal data **must not** be stored on USB drives or other portable media or stored on home or personal computers.*

Where the use of verbatim quotes is proposed in future publications or presentations or it is intended that information is gathered using audio/visual recording devices explicit consent for this must be sought from participants.

F2. Will you share personal, identifiable data with other organisations outside of LJMU or with people outside of your research team? *(e.g. supervisor, co-applicants)*

☐ Yes   ☒ No   ☐ Not Applicable

If yes please provide further details

F3. For how long will any personal, identifiable data collected during the study be stored?

Five years in order to abide by university policy

DECLARATION OF THE PRINCIPAL INVESTIGATOR

- The information in this form is accurate to the best of my knowledge and belief and I take full responsibility for it.

- I undertake to abide by the ethical principles underlying the Declaration of Helsinki and LJMU's REC regulations and guidelines together with the codes of practice laid down by any relevant professional or learned society.

- If the research is approved I undertake to adhere to the approved study procedures and any conditions set out by the REC in giving its favourable opinion.

- I undertake to seek an ethical opinion from LJMU REC before implementing substantial amendments to the approved study plan.

- If, in the course of the administering any approved intervention, there are any serious adverse events, I understand that I am responsible for immediately stopping the intervention and alerting LJMU REC.

- I am aware of my responsibility to comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.

- I understand that any records/data may be subject to inspection for audit purposes if required in the future.

- I understand that personal data about me as a researcher will be held by the University and this will be managed according to the principals of the Data Protection Act.

Version 9 – July 2015

19

- I understand that the information contained in this application, any supporting documentation and all correspondence with LJMU REC relating to the application will be subject to the provisions of the Freedom of Information Act. The information may be disclosed in response to requests made under the Act except where statutory exemptions apply.

- I understand that all conditions apply to my co-applicants and other researchers involved in the study and that it is my responsibility that they abide by them.

X	**TICK TO CONFIRM THAT YOU HAVE READ AND AGREE TO THE DECLARATION ABOVE**

SUBMITTING YOUR APPLICATION FOR REVIEW

Once you have completed the above application form please submit it electronically to either EthicsPR@ljmu.ac.uk for proportionate review or to researchethics@ljmu.ac.uk for full review by the University REC. If possible please submit your application form and any additional supporting documentation as a single pdf file.

APPLICATIONS MUST BE SUBMITTED VIA AN LJMU EMAIL ACCOUNT AND FOR STUDENT APPLICATIONS SUPPORTED BY AN EMAIL / LETTER FROM THE MAIN SUPERVISOR CONFIRMING THAT THEY HAVE READ AND APPROVED THE STUDY / APPLICATION.

CHECKLIST OF DOCUMENTS SUBMITTED ELECTRONICALLY (Please note that applications submitted without the required supporting documents will not be reviewed).

x	Ethics Application Form (MANDATORY)
x	Protocol (MANDATORY) see note below
x	Email / letter from supervisor
	Copies of any recruitment/advertisement material e.g. letters, emails, posters etc.
x	Participant Information Sheet
x	Carer Information Sheet
x	Gatekeeper Information Sheet
x	Participant Consent Form
x	Carer Consent Form
x	Gatekeeper Consent Form
	Non-validated questionnaires
x	List of interview questions
x	Risk Assessment Form
x	Other please specify
CV and reference letter	

Note
A research protocol is a document describing in detail how a research study is to be conducted in practice, including a brief introduction or background to the study, the proposed methodology and a plan for analysing the results. For the purposes of your application for ethical approval it is something which can be presented in a variety of formats dependent on its origin for example:

- *for postgraduate research students it may be the programme of work embedded within their programme registration form (RD9R)*
- *for studies which have obtained external funding it is often the description of what they propose doing which they submitted to the funder*
- *for other students it is the study proposal they have written and had assessed/approved by their supervisor.*

Review as necessitated by changes

	_ Stigmatization as the advocate of that particular aspect of architecture.
	All of them can manifest distress symptoms related to language misunderstandings or a strictly formal first meeting which is not useful for a proper development of the research.
STEP 3 (a) **What are you already doing?** *What is already in place to reduce the likelihood of harm, or to make any harm less serious*	The questionnaire and research method are developed through a triple helix approach where service users and professionals are active subjects in that process. Therefore, the aim is to obtain a questionnaire and a research method which are tailored around people by people with different background, expression of a people centred approach. The outputs will minimize possible misunderstandings between the researcher, gatekeepers and participants, stressing symptoms and habits alterations.
STEP 3 (b) **What further action is needed?** *Compare what you are already doing with good practice. If there is a gap, please list what needs to be done.*	_ A development of a simple and clear e-mail which will be used by the chief investigator to contact facilities where it is written a brief introduction of the research and its targets. Moreover, it will state the complete availability of the researcher for further additional information. _ A detailed description of the activities during a site visit so that facilities and the gatekeepers are aware about the chief investigator's interest avoiding the waste of time and changes in employees' work habits. Moreover, it will allow them to prepare a proper site visit so that the researcher will be able to go with an experienced mental health practitioner. _ A clear participants, gatekeepers information forms and questionaires. They must be easy to understand by all the subjects in order to avoid misunderstanding and distress symptoms.
STEP 4 **How will you put the assessment into action?** *Please remember to prioritise. Deal with the hazards that are high risk and have serious consequences first*	Fundamental will be a definition of the site visit's modality and timing. In other words, the chief investigator will contact a facility which will put the researcher and a gatekeeper in contact. The e-mail will include a simple, brief description of the research, academic references and researcher information and contacts. Consequently, the aim is to arrange the site visit date and to give a first research introduction to the gatekeeper. Moreover, it must be done at least one weeks before the visit. On the day of the site visit, there will be a preliminary informal meeting in between the chief investigator and a gatekeeper where they will read and understand together the participation information sheets and clarify all doubts. Additionally, the chief investigator will go with the gatekeeper in the site visit. At the end of the tour, the gatekeeper will decide to take part or not to the investigation. If the gatekeeper voluntarily decides to be part of the qualitative analysis, his/her role will be to find four volunteers (two users and two care givers) and to explain them through the participant information form the targets, their benefits and risks in taking part to the study. Furthermore, the participants will have one week to decide if to be part of the research venture and to answer the questionnaire. Obviously, if they immediately decide to take part and to answer the time shrinks. Once the questionnaire will be filled out with the gatekeeper support in case of necessity, the gatekeeper will have to collect, to anonymize and to send them back to the chief investigator by e-mail. The choice to support the chief investigator with a gatekeeper who will be mental health practitioner, as it could possibly be an occupational therapist, or psychologist who is very experienced in working with people living with dementia is to reduce all the above listed risks. Dangers which will manifest if the chief investigator who do not have experience in working with people with dementia will do directly the recruitment of volunteers. In particular, the gatekeeper is able to make an assessment of the participant's ability and due to the fact that he/she knows patients well and will readily recognise indicators of a distress and/or decline. Moreover, if should anyone present as experiencing sudden cognitive decline or distress they will be excluded from the evaluation and signposted to the appropriate support and advice services or GP.

Version 9 – July 2015

62

556

EXCERPTS OF SEMI-STRUCTURE QUESTIONNAIRES AND INTERVIEWS (ENGLISH, DUTCH, JAPANESE AND FINNISH LANGUAGES)

Title of Project: THINKING, MAKING, AND LIVING: ARCHITECTURE IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – DESIGNERS.

Study ref: 16/LSA/013, approved by The University Research Ethics Committee (UREC).

This project contributes to Liverpool John Moores University's role in conducting research, and teaching research methods. All the collected data will be kept anonymous and managed only by the researcher in order to protect participants' confidentiality.

I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of this research study and for my data to be used as described in the information sheet provided.

Name of Researcher and School/Faculty:
Davide Landi, PhD student, LJMU School of art and Design.

Questions:

1. Could you describe the philosophy of your practice?

2. When did you started the project? Was it the first time that you faced the theme of architecture and ageing population/dementia?

3. Which was the role of the service users in the design process?

4. Which is the concept of the project?

5. Did you have particular or specific building regulations to follow?

6. All the spaces that we find in your project are driven by a specific use/purpose?Or is there flexibility for private users where they can customize their own space?

7. Are there spaces for collective activities (i.e. community events, markets, etc.)?

8. Do you think that the model which you propose is related to the social/cultural context? Or could those ideas be used in a different environment?

9. Do you try to address behavioural changings in users and workers through your projects? i.e. a slightly different life style so that is possible to have better quality of life or working conditions. Or do you just give shapes and physical consistence to functional requirements?

10. Aware of cultural and social differences (different life styles, behaviours, etc.) which are often in architecture translated in spatial requirements, is it possible to rethink our design standards in order to improve users and workers experience? Will it be possible to propose "radical" changings, in terms of adopting/importing design solution which characterise and are adopted in different countries than the one in which you are based?

11. How the facility is related to the idea of social life and the urban context? How it is connected to the existing community where it is sited?

12. Aware of some social tendencies like the ageing population and after your involvement in the design of facilities for elderly. How do you imagine the city of the future? How would you approach a large scale project?

13. Ideas that you could not realize during the design process?

Title of Project: THINKING, MAKING, AND LIVING: ARCHITECTURE IN AN AGEING

SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA

FRIENDLY ENVIRONMENTS – MANAGERS.

Study ref: 16/LSA/013, approved by The University Research Ethics Committee (UREC).

This project contributes to Liverpool John Moores University's role in conducting research, and teaching research methods. All the collected data will be kept anonymous and managed only by the researcher in order to protect participants' confidentiality.

I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of this research study and for my data to be used as described in the information sheet provided.

Name of Researcher and School/Faculty:
Davide Landi, PhD student, LJMU School of art and Design.

Questions:
1. Have you ever worked in a traditional Elderly care facility?

- Yes
- No

2. If yes, have you noticed an improvement from your positions as a manager?

- Yes
- No

3. If yes, have you noticed a difference in how the facility is managed?

4. What is the demographic make-up of residents?

Number of Female
Number of Male
Average Female age
Average Male age
Percentage of Nationals
Percentage of Foreigners

5. Do the residents come from the surrounding areas (i.e. villages, towns, cities) or from different part of the country?

6. What kind of relationship there is between facility's ownership and residents?

- Residents are owners of the dwellings.
- Residents are tenants of the dwellings.

7. Do the Government economically support the residents?

- Yes
- No

8. What kind of technologies and communication media do residents have free access?

- Computer
- Newspapers
- Magazines
- Smartphone
- Television
- Internet
- Social Networks (Facebook, Instagram, Youtube, etc.)
- Apps

9. Do you have a local communication media?

- Yes
- No

10. If yes, what kind of local media do you use?

- Local Newspapers
- Local Magazines
- Local Television

11. What would you say is unique about the service that you provide?

12. Have you ever heard about Social Return on Investment and Social enterprise?

- Yes
- No

13. If yes, do you think that the facility which you manage is a social enterprise or could become one?

- Yes
- No

Title of Project: THINKING, MAKING, AND LIVING: ARCHITECTURE IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – PROFESSIONAL CAREGIVERS.

Study ref: 16/LSA/013, approved by The University Research Ethics Committee (UREC).

This project contributes to Liverpool John Moores University's role in conducting research, and teaching research methods. All the collected data will be kept anonymous and managed only by the researcher in order to protect participants' confidentiality.

I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of this research study and for my data to be used as described in the information sheet provided.

Name of Researcher and School/Faculty:
Davide Landi, PhD student, LJMU School of art and Design.

Questions:
1. Have you ever worked in a traditional Elderly care facility?

- Yes
- No

2. If yes, have you noticed an improvement in the standard of care provided?

- Yes
- No

3. Could you describe your relationship with the other colleagues and patients?

4. Do you have enough privacy (only in case of cohousing)?

- Yes
- No

5. Do residents have enough privacy?

- Yes
- No

6. Do you think that this building has a positive effect on your way of working?

  • Yes
  • No

7. If yes, how is it effected?

8. Do you think that this building has a positive effect on residents who present mild-moderate dementia?

  • Yes
  • No

9. If yes, how is it effected?

10. What would you say is unique about the service that you provide?

11. When you think about the place where you work in, what immediately comes to your mind? (i.e. a care philosophy of the facility, a particular activity, outside or inside landscape, private and public spaces, etc.)

12. Could you suggest any ways to improve the building?

13. Could you suggest activities between the residents, other groups, the community, village or town (i.e. a new programme, a new space, etc.) that should be adopted by the facility?

Title of Project: THINKING, MAKING, AND LIVING: ARCHITECTURE IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – RESIDENTS.

Study ref: 16/LSA/013, approved by The University Research Ethics Committee (UREC).

This project contributes to Liverpool John Moores University's role in conducting research, and teaching research methods. All the collected data will be kept anonymous and managed only by the researcher in order to protect participants' confidentiality.

I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of this research study and for my data to be used as described in the information sheet provided.

Name of Researcher and School/Faculty:
Davide Landi, PhD student, LJMU School of art and Design.

Questions:
1. Whose decision was it to move here?

• I made the decision to move here on my own
• Other people advised / helped me to make the decision to move here
• Other people made the decision for me to move here

2. What were you most concerned about when moving here? (max. 250 words)

3. Do you think that this environment has helped you to be more independent?

• Yes
• No

4. Do you think that this environment will help you to be more independent in future?

• Yes
• No

5. Have you made ay lifestyle changes since moving here e.g. developing new or different habits?

- Yes
- No

6. Do you have enough privacy here?

- Yes
- No

7. Do you have enough chance to go out e.g. shopping or meeting your relatives?

- Yes
- No

8. How often do you go to the town or city centre?

- Never
- Less than once a week
- About once a week
- About twice a week
- About three times a week
- About four times a week
- About five times a week
- About six times a week
- Every day

9. Where you would trace the border of your neighbourhood? (max. 250 words)

10. What are the most important places for you in the neighbourhood, how do you travel there and how long does it take

Place		Transport		Travel time
Post Office	>	Walking	>	30 minutes

11. Do you read newspapers or watch news on TV?

- Yes
- No

12. Do you use social networks or other forms of technology such as a computer?

- • Yes
- • No

13. Are friendly people important for creating an enjoyable environment?

- • Yes
- • No

14. If you take prescribed medication, do you use more or less than before you moved here?

- • More
- • Less
- • No Change

15. Would you recommend this facility to one of your friends or relatives?

- • Yes
- • No

16. Do you think that this building has a positive effect on you?

- • Yes
- • No

17. When you think about the place where you live in, what immediately comes to your mind? (i.e. a care philosophy of the facility, a particular activity, outside or inside landscape, private and public spaces, etc.) (max. 250 words)

18. Could you suggest any ways to improve the building? (max. 250 words)

19. Could you suggest activities between the residents, other groups, the community, village or town (i.e. a new programme, a new space, etc.) that should be adopted by the facility?(max. 250 words)

If you feel distressed by anything or you need support then contact the following number ----- talk to the -----.

Title of Project: THINKING, MAKING, AND LIVING: ARCHITECTURE AND URBANISM IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – ARCHITECTS.

Study ref: 16/LSA/013, approved by The University Research Ethics Committee (UREC).

This project contributes to Liverpool John Moores University's role in conducting research, and teaching research methods. All the collected data will be kept anonymous and managed only by the researcher in order to protect participants' confidentiality.

I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of this research study and for my data to be used as described in the information sheet provided.

Name of Researcher and School/Faculty:
Davide Landi, PhD student, LJMU School of art and Design.

Questions:
1. Could you describe the philosophy of your practice??

2. When did you started the project?? Was it the first time that you faced the theme of architecture and ageing population??

3. Which was the role of people and service users in the design process??

4. Which is the concept of the project??

5. Did you have particular or specific building regulations to follow??

6. All the spaces that we find in your project are driven by a specific use/purpose??Or is there flexibility for private users where they can customize their own space??

7. Are there spaces for collective activities (i.e. community events, markets, etc.)?

8. Do you think that the model which you propose is related to the social/cultural context?? Or could those ideas be used in a different environment??

9. Do you try to address behavioural changings in users and workers through your projects?? i.e. a slightly different life style so that is possible to have a better quality of life or working conditions. Or do you just give shapes and physical consistence to functional requirements??

10. Aware of cultural and social differences (different life styles, behaviours, etc.) which are often in architecture translated in spatial requirements, is it possible to rethink our design standards in order to improve users and workers experience?? Will it be possible to propose "radical" changings, in terms of adopting/importing design solution which characterise and are adopted in different countries than the one in which you are based??

11. How the facility is related to the idea of social life and the urban context??How it is connected to the existing community where it is sited??

12. Aware of some social tendencies like the ageing population and after your involvement in the design of facilities for elderly. How do you imagine the city of the future?? How would you approach a large scale project??

13. Ideas that you could not realize during the design process??

Contact Details of Researcher:
Davide Landi, Phd Student.
Liverpool John Moores University.
School of Art and Design.
John Lennon Art and Design Building
Duckinfield Street
Liverpool
L3 5RD

D.Landi@2016.ljmu.ac.uk

Titel van het project: THINKING, MAKING, AND LIVING: ARCHITECTURE AND URBANISM IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – MANAGERS.

Study ref: 17/LSA/003, approved by The University Research Ethics Committee (UREC).

Dit project draagt bij aan de rol van John Moores University in het uitvoeren van onderzoek, onderwijs en onderzoek methoden Liverpool. Alle verzamelde gegevens worden anoniem gehouden en alleen beheerd door de onderzoeker met het oog op de vertrouwelijkheid van de deelnemers te beschermen.

Ik heb de bijgevoegde instructie en informatie blad gelezen en wil graag deelnemen aan dit onderzoek. Verder begrijp ik dat mijn ingevulde vragenlijst een bijdrage zal leveren aan dit onderzoek. Ik geef hierbij toestemming om mijn gegevens te delen voor onderzoek doeleinden.

Naam van de onderzoeker en school/faculteit
Davide Landi, PhD student, LJMU School of art and Design.

1. Heeft u ooit gewerkt in een traditionele ouderen verzorgingsfaciliteit

   - Ja
   - Nee

2. Zo ja, heeft u verbeteringen opgemerkt vanuit uw positie als manager?

   - Ja
   - Nee

3. Zo ja, heeft u verschillen gemerkt in hoe de faciliteit is beheerd? (Maximaal 250 woorden)

4. Wat is de demografische samenstelling van de bewoners?

   Aantal vrouw
   Aantal man
   Gemiddelde leeftijd vrouw
   Gemiddelde leeftijd man
   Percentage autochtoon
   Percentage allochtoon

5. Wat voor soort relatie is er tussen de bewoners en het verzorging faciliteit?

- Bewoners zijn eigenaar van de woningen
- Bewoners zijn huurders van de woningen

6. Biedt de overheid enige vorm van economische hulp voor de bewoners?

- Ja
- Nee

7. In wat voor soort technologische en/of communicatie middelen hebben de bewoners gratis toegang tot?

- Computer
- Kranten
- Tijdschriften
- Smartphone
- Televisie
- Internet
- Sociale netwerken (Facebook, Instragram, Youtube enz.)
- Applicaties

8. Heeft u lokale communicatie media?

- Ja
- Nee

9. Zo ja, wat voor soort lokale media gebruikt u?

- Lokale kranten
- Lokale tijdschriften
- Lokale televisie

10. Wat is volgens u het unieke dienst dat u levert? (Maximaal 250 woorden)

11. Heeft u weleens gehoord van teruggave van investeringen op sociaal vlak en ondernemingen?
- Ja
- Nee

12. Zo ja, denkt u dat de faciliteit die u heden beheerd een sociale onderneming is of in de toekomst wellicht een zou kunnen worden?

- Ja
- Nee

Contactgegevens van de Onderzoeker
Davide Landi, Phd Student.
Liverpool John Moores University.
School of Art and Design.
John Lennon Art and Design Building
Duckinfield Street
Liverpool
L3 5RD
D.Landi@2016.ljmu.ac.uk

Titel van het project: THINKING, MAKING, AND LIVING: ARCHITECTURE AND URBANISM IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – PROFESSIONALS.

Study ref: 17/LSA/003, approved by The University Research Ethics Committee (UREC).

Dit project draagt bij aan de rol van John Moores University in het uitvoeren van onderzoek, onderwijs en onderzoek methoden Liverpool. Alle verzamelde gegevens worden anoniem gehouden en alleen beheerd door de onderzoeker met het oog op de vertrouwelijkheid van de deelnemers te beschermen.

Ik heb de bijgevoegde instructie en informatie blad gelezen en wil graag deelnemen aan dit onderzoek. Verder begrijp ik dat mijn ingevulde vragenlijst een bijdrage zal leveren aan dit onderzoek. Ik geef hierbij toestemming om mijn gegevens te delen voor onderzoek doeleinden.

Naam van de onderzoeker en school/faculteit
Davide Landi, PhD student, LJMU School of art and Design.

1. Heeft u ooit gewerkt in een traditionele ouderen verzorgingshuis?

    - Ja
    - Nee

2. Zo ja, heeft u verbetering gemerkt in de standaard gegeven zorg?

    - Ja
    - Nee

3. Zou u uw relatie met andere collega's en patiënten kunnen omschrijven? (Maximaal 250 woorden)

4. Heeft u genoeg privacy (alleen in het geval van gemeenschappelijke verblijf)

    - Ja
    - Nee

5. Hebben de bewoners genoeg privacy?

- Ja
- Nee

6. Vindt u dat dit gebouw een positieve invloed heeft op uw werk?

- Ja
- Nee

7. Zo ja, hoe wordt het beïnvloed? (Maximaal 250 woorden)

8. Denkt u dat dit gebouw een positieve werking heeft op bewoners met een mild tot matige vorm van dementie?

- Ja
- Nee

9. Zo ja, hoe is deze werking? (Maximaal 250 woorden)

10. Wat is volgens u het unieke van de diensten die u levert? (Maximaal 250 woorden)

11. Wanneer u denkt aan uw werk plek, wat komt er dan als eerste in uw gedachte? (d.w.z. zorg filosofie van de faciliteit, een bepaalde activiteit, buiten of binnen landschap, openbare of besloten ruimtes enz.) (Maximaal 250 woorden)

12. Kunt u iets voorstellen om het gebouw te verbeteren? (Maximaal 250 woorden)

13. Kunt u suggereren activiteiten tussen de bewoners, andere groepen, schouders de gemeenschap, dorp of stad (dat wil zeggen een nieuw programma, een nieuwe ruimte, enz.) Zijn, dat wordt vastgesteld door de faciliteit? (Maximaal 250 woorden)

Contactgegevens van de Onderzoeker
Davide Landi, Phd Student.
Liverpool John Moores University.
School of Art and Design.
John Lennon Art and Design Building
Duckinfield Street
Liverpool
L3 5RD

D.Landi@2016.ljmu.ac.uk

Titel van het project: THINKING, MAKING, AND LIVING: ARCHITECTURE AND URBANISM IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – RESIDENTS.

Study ref: 17/LSA/003, approved by The University Research Ethics Committee (UREC).

Dit project draagt bij aan de rol van John Moores University in het uitvoeren van onderzoek, onderwijs en onderzoek methoden Liverpool. Alle verzamelde gegevens worden anoniem gehouden en alleen beheerd door de onderzoeker met het oog op de vertrouwelijkheid van de deelnemers te beschermen.

Ik heb de bijgevoegde instructie en informatie blad gelezen en wil graag deelnemen aan dit onderzoek. Verder begrijp ik dat mijn ingevulde vragenlijst een bijdrage zal leveren aan dit onderzoek. Ik geef hierbij toestemming om mijn gegevens te delen voor onderzoek doeleinden.

Naam van de onderzoeker en school/faculteit
Davide Landi, PhD student, LJMU School of art and Design.

1. Wie zijn besluit was het om hier naar toe te verhuizen?

- Ik heb zelf besloten om hier te gaan wonen;
- Anderen hebben mij geadviseerd/geholpen bij het besluit om hier te wonen;
- Anderen hebben voor mij besloten om hier te wonen.

2. Waar was u het meest om bezorgd toen u hier naar toe verhuisde? (maximaal 250 woorden)

3. Denkt u dat deze omgeving u geholpen heeft om zelfstandiger te worden?

- Ja
- Nee

4. Denkt u dat deze omgeving u zal helpen om nog zelfstandiger te worden in de toekomst?

- Ja

- Nee

5. Heeft u uw levensstijl aangepast sinds u hier woont bijv. het ontwikkelen van of andere gewoontes?

- Ja
- Nee

6. Heeft u genoeg privacy hier?
- Ja
- Nee

7. Heeft u voldoende mogelijkheden om de deur uit te gaan zoals winkelen of het zien van bekenden?

- Ja
- Nee

8. Hoe vaak bezoekt u de stad of centrum?

- Nooit;
- Minder dan een keer per week;
- Ongeveer een keer per week;
- Ongeveer twee keer per week;
- Ongeveer drie keer per week;
- Ongeveer vier keer per week;
- Ongeveer vijf keer per week;
- Ongeveer zes keer per week;
- Elke dag;

9. Waar zou u de rand van uw wijk aanwijzen? (maximaal 250 woorden)

10. Wat zijn voor u de meest belangrijke locaties in uw wijk. Hoe vervoert u zich daar? Hoe lang duurt het?

Plaats	Vervoer	Reistijd
Postkantoor >	Lopend >	30 minuten

11. Leest u kranten of kijkt u nieuws op televisie?

- Ja
- Nee

12. Maakt u gebruik van sociale netwerken of andere vormen van technologie zoals een computer?

- Ja
- Nee

13. Zijn vriendelijke mensen belangrijk voor het creëren van een aangename omgeving?

- Ja
- Nee

14. Gebruikt u meer of minder voorgeschreven medicatie sinds u hier woont?

- Meer
- Minder
- Geen verandering

15. Zou u uw bekenden of familie deze faciliteit aanraden?

- Ja
- Nee

16. Vindt u dat dit gebouw u positief beïnvloedt?

- Ja
- Nee

17. Wat komt er als eerste in gedachte wanneer u denkt aan de plek waar u woont? (maximaal 250 woorden)

18. Kunt u iets voorstellen om het gebouw te verbeteren? (maximaal 250 woorden)

19. Kunt u activiteiten (zoals een nieuwe ruimte of programma) bedenken van de bewoners, andere groepen, de dorp of stad dat zou overgenomen moet worden door de verzorgingsfaciliteit? (maximaal 250 woorden)

Mocht u zich bedroefd voelen door iets of ondersteuning nodig hebben neem dan zo spoedig mogelijk contact op met Alzheimer Café Rotterdam - Alexander De Prinsenwiek praten met 010-2511400.

Title of Project: THINKING, MAKING, AND LIVING: ARCHITECTURE AND URBANISM IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – MANAGERS.

研究参照記号：17/LSA/003「大学研究倫理委員会承認済」
本企画はリヴァプールのジョンモアス大学の研究調査並びに教育方法調査の役割に貢献するものです。
収集されたデーターはすべて参加者の秘密を厳守し、研究者用にのみ用いられます。

私は上記の情報を読んだ結果、喜んで参加致します。

１．あなたは今まで老人介護施設で働いたことがありますか？

　　　●はい
　　　●いいえ

２．はい、の場合、あなたはマネジャーの立場から見て改善の余地があることに気が付き ましたか？

　　　●はい
　　　●いいえ

３．はい、の場合、介護施設は如何に運営されるべきであるかの違いについて書いて下さい。
　「最大500~600字以内」

４．老人介護施設の入居者の統計上の構成はどの様になっていますか？

　　　女性の数
　　　男性の数
　　　女性入居者の平均年齢
　　　男性入居者の平均年齢
　　　自国民のパーセンテージ
　　　外国人のパーセンテージ

5．住民は周辺地域「村、町、都市」から来たのか、あるいは国の異なる地域から来たのか？　「最大500~600字以内」

6.　介護施設の所有者と入居者の關係はどうなっていますか？

　入居者はその住居の所有者である。
　入居者はその住居の賃借人である。

7.　政府は入居者に対して経済的援助を行っていますか？

　　　　●はい
　　　　●いいえ

8.　介護施設の入居者は次のどの様な技術とコミュニケーションメデイアに自由にアクセス　出来ますか？

　　　　●　　　コンピュター
　　　　●　　　新聞
　　　　●　　　雑誌
　　　　●　　　スマートフォーン
　　　　●　　　テレビ
　　　　●　　　インターネット
　　　　●　　　ソーシャールネットワーク「フエースブック、インスタグラム、ユーチューブ等」
　　　　●　　　アツプリ

9.　地方のコミュニケーションメデイアがありますか？

　　　　●はい
　　　　●いいえ

10.　はい、の場合、どの様な地方のコミュニケーションメデイアを使っていますか？

　　　　●　地方新聞
　　　　●　地方雑誌
　　　　●　地方テレビ

１１.　あなたが提供することが出来るユニークな提言について書いて下さい。「最大500~600字以内」

１２.　あなたは今まで「社会的投資利益」や「社会的企業」について聞いた事があります　か？

　　　　●はい
　　　　●いいえ

１３．はい、の場合、現在あなたが管理している老後介護施設は社会的企業ですか？
又は将 来、それになりますか？
「最大　　　500~600字以内」

研究者の連絡先の詳細：
Davide Landi, Phd Student.
Liverpool John Moores University.
School of Art and Design.
John Lennon Art and Design Building
Duckinfield Street
Liverpool
L3 5RD

D.Landi@2016.ljmu.ac.uk

Title of Project: THINKING, MAKING, AND LIVING: ARCHITECTURE AND URBANISM IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION FOR AGED PEOPLE AND DEMENTIA FRIENDLY ENVIRONMENTS – PROFESSIONALS.

研究参照記号：17/LSA/003「大学研究倫理委員会承認済」
本企画はリヴァープールのジョンモアス大学の研究調査並びに教育方法調査の役割に貢献するものです。
収集されたデーターはすべて参加者の秘密を厳守し、研究者用にのみ用いられます。

私は上記の情報を読んだ結果、喜んで参加致します。

１．あなたは今まで老人介護施設で働いたことがありますか？

　　　●はい
　　　●いいえ

２．　はい、の場合、あなたは介護基準から見て改善がなされたことに気が付きましたか？

　　　●はい
　　　●いいえ

３．あなたの同僚や入居者との關係について書いて下さい。「最大500~600字以内」

４．あなたは充分なプライバシィがありますか「コウハウジングの場合のみ」

　　　●はい
　　　●いいえ

５．入居者は充分なプライバシィがありますか？

　　　●はい
　　　●いいえ

６．あなたは職場の建物が働く場所として良い影響があると思いますか？

        ●はい
        ●いいえ

７．はい、の場合、どんな影響がありますか？「最大500~600字以内」

８．あなたは、現在、軽微な認知症の入居者に対してこの職場の建物は良い影響を与えると　　思いますか？

        ●はい
        ●いいえ

９．はい、の場合、どんな影響ですか？「最大500~600字以内」

１０．あなたが提供の出来るユニークなサービスについて書いて下さい。「最大500~600　　　字以内」

１１．あなたが働いている職場の建物について考える時、直ぐに、こころに浮かぶのは何で　　しょうか？「例えば、老後施設の介護哲学、特別な活動、外部、内部の美化景観整　　　備、私的公的空間など」「最大500~600字以内」

１２．職場の建物を改善する方法があれば、教えてください。「最大500~600字以内」

１３．老後介護施設が採用すべき入居者と他のグループ、コミュニティ、町村「例えば、新　　しいプログラム、新しい空間など」の活動について、教えてください。「最大　500~600字以内」

研究者の連絡先の詳細：
Davide Landi, Phd Student.
Liverpool John Moores University.
School of Art and Design.
John Lennon Art and Design Building
Duckinfield Street
Liverpool
L3 5RD

D.Landi@2016.ljmu.ac.uk

Title of Project: THINKING, MAKING, AND LIVING: ARCHITECTURE AND URBANISM IN AN AGEING SOCIETY. INTERNATIONAL INVESTIGATION OF ELDERLY AND DEMENTIA FRIENDLY ENVIRONMENTS - ユーザー.

Name of Researcher and School/Faculty
Davide Landi, PhD student, LJMU School of Art and Design.

あなたは研究調査に参加するように招待されました。この招待をお受けいただく前に、なぜこの研究が行われているのか、それには何が含まれているのかを理解していただくことが重要です。以下の資料をお読みいただき、不明点やご質問、より詳しい情報が必要な場合には遠慮なくお問合せください。判断を焦らずに、十分にご検討いただきますようお願い致します。

1. 調査の目的は何ですか？

高齢者と認知症患者にとって優しい環境が居住者にとってプラスの効果をもたらすかどうかを確認したいと考えています。次のことについてのあなたの理解と経験について質問したいと思います：

      ·生活の質
      ·健康と幸福
      ·社会活動と役割

質問に対する正解または間違いはありません。調査の目的は、あなたの経験をより詳細に理解することです。最後に、このプロジェクトは、博士課程の学生である主任研究者が率いる博士論文の一部です。

2. 調査への参加は絶対ですか？

いいえ、参加するかどうかはあなた次第です。ご協力いただける場合には、この情報書類が配布され、同意書に署名するよう依頼されます。引き続きいつでも理由を問わず辞退することができます。撤回の決定があなたの権利や将来の治療やサービスに影響を与えることはありません。

3. 私が参加した場合には、私に何が起こるでしょうか？

評価に参加することを決めた場合は、高齢者や認知症に暮らすことに関する19個の簡単なアンケートに答えていただくことになります。例えば「お出かけや買い物を

したり、親戚に会う機会がありますか？」などです。

アンケートには、従業員のサポートを希望する場合、従業員と共に回答することもできます。これは後日、調査内容と質問を十分に理解する時間を確保するためです。評価への参加は自主的なものです。個人的な経験について話すことが不快な場合には、答えることをお勧めいたしません。

最初の打ち合わせの場では、ゲートキーパー（地元の保健従事者または精神保健従事者）と研究者が、参加者の参加要件書類を一緒に読んで、質問に答えていきます。

アンケートには約25分かかります。最初の打ち合わせの終わりに、研究に参加するかどうかを決定していただきます。アンケートに参加することに決めた場合、最大1週間の内にアンケートに回答していただきます。

アンケートを回答し終わるのに1日以上を要する場合、あなたは調査員から封筒を受けとります。封筒には匿名の住所が記載されています。記入済みのアンケートを封筒に入れたのち封を閉じます。調査員からあなたへ封筒を収集する連絡が入ります。調査員は封筒を収集し、主任研究員に郵送します。調査員が受け取った封筒を開封して、アンケートを見ることはありません。

4. リスクとメリットはありますか？

この研究にはリスクはありませんが。もし、あなたが何か困った場合、又は何らかの手助けが必要の場合には、次の電話番号--------------に電話するか、又は誰々に----------に話してください。

あなたが話す内容が、高齢者や認知症に優しい環境に関する国際調査の評価の一環に加わるという可能性があるとというメリットがあります。居住者は、高齢者および認知症に優しい環境の設計基準の評価および改善の中心的かつ社会的役割を果たす為の底上げの活動への一部になりえます。

5. 私が研究に参加することは機密扱いされますか？

はい。私たちは機密保持を非常に真摯に受け止めています。個人情報は収集または保管されず、アンケートの中でご提供いただいた情報は匿名で扱われます。

Davide　Landiは答えられたアンケートをすぐにパスワードロックをかけコンピューターに保存されます。アンケート結果の原本は鍵付きの書棚で保管されます。

589

最終の評価報告書が取りまとめられたてから、約3か月後に個人情報は安全に破棄されます。

質問に答える前に、個人識別番号が付与されアンケートに記載されます。貴方だけの唯一のコードを使用することで、いつでも研究内容を取り出すことができます。下記のアドレスへ識別番号と共にお問い合わせください。

研究参照記号：17/LSA/003「大学研究倫理委員会承認済」。

研究者の連絡先の詳細：
Davide Landi, Phd Student.
Liverpool John Moores University.
School of Art and Design.
John Lennon Art and Design Building
Duckinfield Street
Liverpool
L3 5RD
D.Landi@2016.ljmu.ac.uk

学術監督の連絡先の詳細：
Dr. Robert G. Macdonald, Senior Lecturer.
Liverpool John Moores University.
School of Art and Design.
John Lennon Art and Design Building
Duckinfield Street
Liverpool
L3 5RD
R.G.MacDonald@ljmu.ac.uk
0151 231 3710

この研究への関与についていかなる懸念がある場合は、最初に研究者と話し合ってください。苦情を申し立てる場合には、researchethics@ljmu.ac.ukに連絡してください。あなたのご連絡は、必要に応じて独立した担当者へ転送されます。

Projektin nimi: AJATTELU, TEKEMINEN JA ELÄMINEN: ARKKITEHTUURI JA URBANISMI IKÄÄNTYVÄSSÄ YHTEISKUNNASSA.

KANSAINVÄLINEN TUTKIMUS IKÄÄNTYMIS- JA DEMENTIAYSTÄVÄLLISET YMPÄRISTÖT - JOHTAJILLE (MANAGERS).

Tutkimuksen viite: 17 / LSA / 003, jonka yliopiston tutkimusetiikka -komitea (UREC) on hyväksynyt.

Tämä projekti edistää Liverpool John Moores -yliopiston roolia tutkimuksen tekemisessä ja opetusmenetelmien opetuksessa. Kaikki kerätyt tiedot säilytetään nimettömänä ja niitä hallinnoi vain tutkija, jotta he voivat suojella osanottajien luottamuksellisuutta. Olen lukenut tiedotteen ja ymmärrän, että täyttämällä ja palauttamalla tämän kyselylomakkeen, annan suostumukseni osallistua tähän tutkimustutkimukseen ja minun tietoni käyttötarkoituksen mukaisesti.

Tutkijan nimi ja koulu / tiedekunta:
Davide Landi, tohtori, LJMU Taideteollinen korkeakoulu.

1. Oletko koskaan työskennellyt perinteisessä vanhustyössä?

> -Kyllä
> -En

2. Jos kyllä, oletko huomannut parannusta johtajana toimimisessasi?

> -Kyllä
> -En

3. Jos kyllä, oletko huomannut eroa, miten laitosta johdetaan? (enintään 250 sanaa)

4. Mikä on asukkaiden väestörakenne?

> Naisten määrä
> Miesten määrä
> Naisten keski-ikä
> Miesten keski-ikä
> Suomalaisten prosenttiosuus
> Ulkomaalaisten prosenttiosuus

5. Tulevatko asukkaat ympäröiviltä alueilta vai eri puolilta maata? (enintään 250 sanaa)

6. Minkälainen suhde laitoksen omistajuuden ja asukkaiden välillä on?

Asukkaat ovat asuntojen omistajia
Asukkaat ovat asuntojen vuokralaisia

7. Tukeeko hallitus taloudellisesti asukkaita?

     -Kyllä
     -Ei

8. Mihin teknologioihin ja viestimiin asukkailla on vapaa pääsy?

     -Tietokone
     -Sanomalehdet
     -Aikakausilehdet
     -Älypuhelin
     -Televisio
     -Internet
     -Sosiaalinen media (Facebook, Instagram, Youtube etc.)
     -Sovellukset

9. On teillä paikallinen media?

     -Kyllä
     -Ei

10. Jos kyllä, mitä paikallista media käytät?

     -Paikallislehdet
     -Paikalliset aikakausilehdet
     -Paikallistelevisio

11. Mikä on mielestäsi ainutlaatuista tarjoamassasi palvelussa? (250 sanaa)

12. Oletko koskaan kuullut sijoutuksesta saadusta sosiaalisesta tuotosta ja sosiaalisista yrityksistä?
      -Kyllä
      -Ei

13. Jos kyllä, Onko mielestäsi johtamasi laitos sosiaalinen yritys tai voisiko se olla?
      -Kyllä
      -Ei

Tutkijan yhteystiedot:
Davide Landi, Tohtori opiskelija.
Liverpool John Moores Yliopisto.

Projektin nimi: AJATTELU, TEKEMINEN JA ELÄMINEN: ARKKITEHTUURI JA URBANISMI IKÄÄNTYVÄSSÄ YHTEISKUNNASSA.

KANSAINVÄLINEN TUTKIMUS IKÄÄNTYMIS- JA DEMENTIAYSTÄVÄLLISET YMPÄRISTÖT - AMMATTILAISILLE (PROFESSIONALS).

Tutkimuksen viite: 17 / LSA / 003, jonka yliopiston tutkimusetiikka -komitea (UREC) on hyväksynyt.

Tämä projekti edistää Liverpool John Moores -yliopiston roolia tutkimuksen tekemisessä ja opetusmenetelmien opetuksessa. Kaikki kerätyt tiedot säilytetään nimettömänä ja niitä hallinnoi vain tutkija, jotta he voivat suojella osanottajien luottamuksellisuutta. Olen lukenut tiedotteen ja ymmärrän, että täyttämällä ja palauttamalla tämän kyselylomakkeen, annan suostumuksen osallistua tähän tutkimustutkimukseen ja minun tietoni käyttötarkoituksen mukaisesti.

Tutkijan nimi ja koulu / tiedekunta:
Davide Landi, tohtori, LJMU Taideteollinen korkeakoulu.

1. Oletko koskaan työskennellyt perinteisessä vanhustyössä?

>   -Kyllä
>   -En

2. Jos kyllä, oletko huomannut kehitystä hoidon tasossa?

>   -Kyllä
>   -Ei

3. Kuinka kuvailisit suhdettasi työkavereihisi ja asiakkaisiin? (max. 250 sanaa)

4. Onko sinulla riittävästi yksityisyyttä (ainoastaan yhteisasumistapauksissa)?

>   -Kyllä
>   -Ei

5. Onko asukkailla riittävästi yksityisyyttä?

>   -Kyllä
>   -Ei

6. Onko rakennuksella myönteisiä vaikutuksia sinun tapaasi työskennellä?

    -Kyllä
    -Ei

7. Jos kyllä, mitkä vaikutukset ovat? (max. 250 sanaa)

8. Onko rakennuksella myönteisiä vaikutuksia asukkaisiin joilla on lievä dementia?

    -Kyllä
    -Ei

9. Jos kyllä, kuinka mitkä vaikutukset ovat) (max. 250 sanaa)

10. Mitä ainutlaatuista on mielestäsi tarjomassanne palvelussa) (max. 250 sanaa)

11. Kun ajattelet paikkaa, jossa työskentelet, mitä tulee välittömästi mieleesi? (laitoksen hoitofilosofia, jokin tietty toiminta, sisä- tai ulkotilat, yksityiset ja julkiset tilat jne.) (max. 250 sanaa)

12. Millä tavoin rakennusta voisi kehittää? (max. 250 sanaa)

13. Voisitko ehdottaa toimintaa asukkaiden, muiden ryhmien, yhteisön tai asuinalueen osalta (uusi toiminta, uusi tila jne.) mikä pitäisi tuoda laitokseen? (max. 250 sanaa)

Tutkijan yhteystiedot:
Davide Landi, Tohtori opiskelija.
Liverpool John Moores Yliopisto.
Taiteen ja muotoilun laitos.
John Lennon Art and Design Building Duckinfield Street Liverpool L3 5RD
D.Landi@2016.ljmu.ac.uk

Projektin nimi: AJATTELU, TEKEMINEN JA ELÄMINEN: ARKKITEHTUURI JA URBANISMI IKÄÄNTYVÄSSÄ YHTEISKUNNASSA.

KANSAINVÄLINEN TUTKIMUS IKÄÄNTYMIS- JA DEMENTIAYSTÄVÄLLISET YMPÄRISTÖT - PALVELUJEN KÄYTTÄJILLE (RESIDENTS).

Tutkimuksen viite: 17 / LSA / 003, jonka yliopiston tutkimusetiikka -komitea (UREC) on hyväksynyt.

Tämä projekti edistää Liverpool John Moores -yliopiston roolia tutkimuksen tekemisessä ja opetusmenetelmien opetuksessa. Kaikki kerätyt tiedot säilytetään nimettömänä ja niitä hallinnoi vain tutkija, jotta he voivat suojella osanottajien luottamuksellisuutta. Olen lukenut tiedotteen ja ymmärrän, että täyttämällä ja palauttamalla tämän kyselylomakkeen, annan suostumuksen osallistua tähän tutkimustutkimukseen ja minun tietoni käyttötarkoituksen mukaisesti.

Tutkijan nimi ja koulu / tiedekunta:
Davide Landi, tohtori, LJMU Taideteollinen korkeakoulu.

1. Kenen päätös oli muuttosi palvelutaloon?

    -Tein päätöksen itse
    -Muut ihmiset neuvoivat/auttoivat tekemään päätöksen muuttamisestani
    -Muut ihmiset tekivät päätöksen muuttamisestani

2. Mistä olit eniten huolissasi muuttaessasi palvelutaloon? (max. 250 sanaa)

3. Onko mielestäsi palvelutalo –ympäristö helpottanut sinua olemaan itsenäisempi?

    –Kyllä
    -Ei

4. Auttaako pavelutalo –ympäristö sinua olemaan itsenäisempi tulevaisuudessa?

    -Kyllä
    -Ei

5. Onko elämäntapasi muuttunut muutettuasi pavelutaloon, onko sinulla uusia tai erilaisia tapoja?

   -Kyllä
   -Ei

6. Onko sinulla riittävsti yksityisyyttä?

   -Kyllä
   -Ei

7. Onko sinulla riittävästi mahdollisuuksia käydä esimerkiksi ostoksilla tai tavata sukulaisiasi?

   -Kyllä
   -Ei

8. Kuinka usein käyt kaupungilla/kaupungin keskustassa?

   -En koskaan
   -Vähemmän kuin kerran viikossa
   -Noin kerran viikossa
   -Noin kaksi kertaa viikossa
   -Noin kolme kertaa viikossa•
   -Noin neljä kertaa viikkossa
   -Noin viisi kertaa viikossa
   -Noin kuusi kertaa viikossa
   -Joka päivä

9. Mihin rajaisit naapurustosi? (max. 250 sanaa)

10. Mitkä ovat sinulle naapurustosi tärkeimmät paikat, kuinka kuljet sinne ja kuinka kauan se kestää?

Esimerkkitaulukko:

Paikka		Kulkemistapa		Kulkemisaika
Posti	>	Kävely	>	30 minuuttia

11.Luetko lehtiä tai katseletko televisiota?

     -Kyllä
     -En

12. Käytätkö sosiaalista mediaa tai muuta teknologiaa kuten tietokonetta?

     -Kyllä
     -En

13. Ovat ko ystävälliset ihmiset hyvän ympäristön luomisessa?

     -Kyllä
     -Ei.

14. Jos käytät reseptilääkitystä, käytätkö lääkkeitä enemmän vai vähemmän muutettuasi tänne?

     -Enemmän
     -Vähemmän
     -Ei muutosta

15. Suosittelisitko tätä palvelutaloa ystävällesi tai sukulaisellesi?

     -Kyllä
     -En

16. Onko tällä rakennuksella myönteinen vaikutus sinuun?

     -Kyllä
     -Ei

17. Kun ajattelet paikkaa, jossa työskentelet, mitä tulee välittömästi mieleesi? (laitoksen hoitofilosofia, jokin tietty toiminta, sisä- tai ulkotilat, yksityiset ja julkiset tilat jne.)
(max. 250 sanaa)

18. Millä tavoin rakennusta voisi kehittää? (max. 250 sanaa)

19. Voisitko ehdottaa toimintaa asukkaiden, muiden ryhmien, yhteisön tai asuinalueen osalta (uusi toiminta, uusi tila jne.) mikä pitäisi tuoda laitokseen? (max. 250 sanaa)

Jos koet huolta tai tarvitset tukea, ota yhteyttä seuraavaan numeroon: 09 4542750 Helsingin Alzheimer -yhdistys ry

Tutkijan yhteystiedot:
Davide Landi, Tohtori opiskelija.
Liverpool John Moores Yliopisto.
Taiteen ja muotoilun laitos.
John Lennon Art and Design Building Duckinfield Street Liverpool L3 5RD
D.Landi@2016.ljmu.ac.uk

REFERENCE LIST

Arendt, H. (1958) *The Human Condition.* Chicago (IL): The University of Chicago Press.

Bestor, C. T. (1985). Tradition and Japanese Social Organization: Institutional Development in Tokyo Neighborhoods. *Ethnology* [online] 24 (2), pp. 121-135. DOI: 10.2307/3773554. [Accessed November 17, 2016].

Burdett, R., and Sudjic, D. (eds.) (2008) *The Endless City.* London: Phaidon.

Curtis, W.J.(2009) *Modern Architecture Since 1900.* London: Phaidon.

Elliot, A.; Masataka, K. and Sawai, A. (eds.) (2013) J*apanese Social Theory. From Individualization to Globalization.* London: Routledge.

Frampton, K. (2007) *Modern Architecture. A Critical History.* London: Thames & Hudson.

Fututake, T.(1989) *Japanese Social Structure: Its Evolution in the Modern Century.* Tokyo: University of Tokyo Press.

Hall. E.T. (1969) *The Hidden Dimension.* New York (NY): Anchor Books Edition.

Hayami A., and Uchida N. (1972) Size of Household in a Japanese County Throughout the Tokugawa Era. In: Laslett P. (ed.) *Household and Family in Past Times.* Cambridge: Cambridge University Press, pp. 473-516.

Henke N., Kadonaga S., and Kanzler L. (2009) Improving Japan's Health Care System

[online] *McKinsey Quarterly Available* at: http://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/improving-japans-health-care-system. [Accessed: 26th March 2017].

Johnson, B. (2010) *London Housing Design Guide.* London: London Development Agency.

Kurokawa, K. (1988). *Rediscovering Japanese Space*. New York (NY): Weatherhill.

Labit, A. and Dubost, N. (2016) Housing And Ageing In France And Germany: The Intergenerational Solution. *Housing, Care and Support* [Online] 19 (2), pp. 45-54. DOI: https://doi.org/10.1108/HCS-08-2016-0007. [Accessed: 8th September, 2016].

Landi, D. (2017) Towards New Architectural and Urban Typologies: Thinking, Making and Living as a Post Occupancy Evaluation Method. *Conscious Cities Journal* [online] 3. Available at: http://www.ccities.org/towards-new-architectural-urban-typologies-thinking-making-living-post-occupancy-evaluation-method/. [Accessed: 27th January 2018].

Lefebvre, H. (2014) *Toward An Architecture of Enjoyment.* Minneapolis (MN): University of Minnesota Press.

Mitchell, J. W. (2004) *Me++. The Cyborg Self and the Networked City.* Cambridge (MA): MIT Press.

Mulligan, M. (ed.) (2008) *Nurturing Dreams*. Cambridge (MA): MIT Press.

Myerson, J. (2017) *Interview* with Davide Landi. Liverpool – London, 29th May 2017.

Myerson, J. (ed.) (2017) *New Old.* London: Design Museum.

Nakane, C. (1970) *Japanese Society.* Los Angeles (CA): University of California Press.

OECD (2011) *Doing Better for Families*. Paris: OECD Publishing.

OECD (2012) *Compact City.* Paris: OECD Publishing.

OECD (2016) *Territorial Review, Japan 2016.* Paris: OECD Publishing.

Ohno, H. (2017) *Fiber City: Tokyo 2050.* Tokyo: University of Tokyo Press.

Ohno, H. (2017) *Interview* with Davide Landi. Tokyo (Japan), 1st September 2017.

Ozaki, R. (2002) Housing as Reflection of Cultures. *The Housing Journal* [online] 17 pp. 209-227. DOI: 10.1080/02673030220123199 [Accessed: 27th September 2016]

Ozaki, R. (2001) Society and Housing form: Home-Centredness in England vs. Family-Centredness in Japan. *The Journal of Historical Sociology* [online] 14 pp. 337-357. DOI: 10.1111/1467-6443.00149. [Accessed: 27th September 2016].

Radovic, D., and Boontharm, D. (eds.) (2012) *Small Tokyo.* Tokyo: Flick Studio.

Shirahase, S. (2014) *Social Inequality in Contemporary Japan.* London: Routledge.

Torrington, J. (2017) Home Design: is It Fit for Old Age? In: Myerson, J. (ed.) *New Old.* London: Design Museum.

Wall, R. 1972. Means of Family Structure in England from Printed Sources. In: Laslett P. (ed.) *Household and Family in Past Times.* Cambridge, UK: Cambridge University press, pp. 159-204

Watkin, D. (2005) *A History of Western Architecture.* London: Laurence King Publishing.

World Health Organization (WHO), and Ministry of Health Labor and Welfare (2012) *Health Service Delivery Profile.* Tokyo: Ministry of Health Labor and Welfare.

Yamamoto, R. (2012) *Local Community Area Principles.* Tokyo: INAX Publishing.

Yamamoto, R. (2012) *Riken Yamamoto Monograph.* Tokyo: TOTO

Yamamoto, R. (2014) *How to Make a City.* Luzern: Architekturgalerie Luzern.

Yamamoto, R. (2015) *The Space of Power and the Power of Space: Designing Between Personal and State Spaces.* Tokyo: Kodansha.

Yamamoto, R. (2017) *Interview* with Davide Landi. Yokohama (Japan), 22nd September 2017.