Article

'The Open Typology': Towards Socially Sustainable Architectural and Care Types

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Guest Editor: Glyn Everett, University of the West of England, UK

Peer review:
This article has been peer reviewed through the journal's standard double blind peer-review, where both the reviewers and authors are anonymised during review.

Open access:
Architecture_MPS is a peer-reviewed open access journal.

Abstract

One aspect that characterises the twenty-first century is its accomplishments such as better health-care systems, improved economies, a reduction in infant mortality and a growing number of adults living longer. However, these accomplishments can have a downside. For example, people are living longer while at the same time dementia rates are increasing significantly. With the increase in demand 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 shift in the care model. Additionally, difficulties in defining a clear dividing line between normal ageing and pathological ageing have led to a stigmatisation of older adults as a social and economic burden. This type of segregation and stigmatisation must be addressed to ensure future care delivery is inclusive. The positive benefits of an inclusive care system are both social and economic, and at an individual level it can positively impact upon an older adult's mental and physical well-being.

Taking this into consideration, the aim of this paper is to describe and empirically explore Humanitas© in Deventer, the Netherlands, a nursing home with a population of 50 older adults with dementia, 80 people with severe physical suffering, 20 people with social difficulties, 10 people in short stay for recovery and 6 university students. This analysis will be adopted as a 'tool' for the definition of a new way of conceiving architectural types in contemporary culture, based on the concept of an 'open system' described by Richard Sennett. In this study, an open system is able to promote a new paradigm of care built upon inclusive collaboration and teamwork between different categories of health-care providers, volunteers, residents and their families. This will allow an alternative paradigm of older adults' long-term care and its architectural correlate to 'normalise' ageing and its related mental and physical impairments, rather than to 'medicalise' and stigmatise.

Keywords: open architecture; open city; architectural type; ageing population; intergenerational living environment; social inclusion

Introduction

The scientific discoveries of the seventeenth and eighteenth centuries, such as electricity and metallurgy, together with the rapidly growing industrial sector, led to the emergence of a new economic model and the beginning of modern capitalism.[1] The city, therefore, became something different.[2] Curtis,[3] for instance, labels this transformation the 'mechanisation of the city', while Tafuri[4] writes about it as the passage from the city as a structure to the city as an 'accumulation mechanism', dominated by technological progress. The city as a mechanism put emphasis on its efficiency and performance according to the requirements of the new economic model. Over time, the city and its buildings acquired spatial segregation.[5] Nowadays, this urban and architectural segregation has strengthened social and economic inequalities among the city's inhabitants, such as the distinction between the 'healthy and the sick'[6] (e.g. an increasing number of older adults being socially isolated).[7] This is an out-of-date spatial segregation, which supports certain groups but limits others.[8]

The critique of zoning and single-use development is nothing new in sociology and architecture. In his well-known book *The Architecture of the City*, for example, Aldo Rossi[9] rejected naive functionalism and proposed *types* and *events* as the two generative elements of the city. In the same vein, authors such as Picon[10] and Moneo[11] framed their notion of types, allowing them to consider types as an architectural tool for the translation of a society's articulation into the built environment. A type is not a building itself, or its forms. Types constitute the constant logical principle, the essence of a work of architecture, which changes in shape and aspiration from society to society.

Nevertheless, the twenty-first-century proliferation of zoning, and the affirmation of a global capitalisation, are permeated by a new demographic landscape. This is the result of health and socio-economic achievements, such as better health-care systems, improved economies, a reduction in infant mortality and a growing number of adults living longer. As a result of people living longer, the rate of people with physical and mental impairments such as dementia is increasing, with a consequent reliance on high-dependency services. Expenditures are expected to increase out of control of societal budgets.[12] On the one hand, this has inevitably led to the stigmatisation of older adults as a social and economic burden.[13] On the other hand, it provides space for potential innovative economic models and informal collaborations, and thereby for architectural correlates. This provides the basis for a renewed notion of types, which represents the most intense moment in architecture as a discipline.[14] Consequently, do architectural correlates, which embody an alternative notion of types, exist? This article empirically analyses Humanitas©, a nursing home in Deventer, the Netherlands, which proposes and embodies an innovative response beyond meeting the requirements and standards of an ageing population. Since 2012, Humanitas Deventer has adopted a radically transformed care model in a 1964 Dutch functionalist building.

The reader should bear in mind that this study has some limitations. The notion of types aims to frame a general design principle. While I attempt to introduce an alternative notion of types through a case study analysis within a limited geographical area and a specific architectural research field, this may have implications for generalisations from the results. There is a danger of mere repetition of its principles – a 'frozen mechanism'.[15] Unfortunately, the paper is unable to encompass the entire architectural domain. Therefore, it represents an initial insight into this subject. Additionally, the adopted methodology is 'thinking, making and living'.[16] This is a one-time post-occupancy evaluation framework, and therefore the data were collected at only one time. Consequently, longitudinal studies may reveal new patterns. Lastly, most of the data were obtained from interviews and semi-structured questionnaires (self-report measures), which introduces a possible subjectivity in results and analysis.

This critical investigation provides an insight into the relation between care models, lived experiences and the architectural frame. In addition, it addresses recommendations to policymakers and designers for thinking about and making more socially sustainable architectural types:[17] 'the open typology.' To achieve this, the article divides into two main parts. The first part is made up of the sections: *Methodology*, *New Social Settings*, *The Historical Precedent of Housing and Care Models in the Netherlands*, *What is Type?* and *Open Systems: The Open City Versus the Open Typology*. This part proposes a robust methodological and theoretical background. It covers both architectural theories and Dutch socio-demographic tendencies. The second part is made up of the sections: *Theming 1: Redefining the Notion of Typology* and *Theming 2:*

A New Paradigm of Care. They constitute the discussion surrounding the necessity for a renewed notion of architectural types.

From this, to anticipate my conclusion, the 'open typology' emerges from the nebulous spectrum of older adults' long-term care facilities.[18] As in the theoretical project A Green Archipelago by OFFICE KGDVS, it emphasises the shift from the idea of cure to the notion of care.[19] The 'open typology', therefore, is the outcome of a 'self-adjusting unconscious cultural process', which aims to redefine a new equilibrium within the contemporary context.[20]

Methodology

The study aims to interpret empirically Humanitas Deventer's generative process and features to define the relevant aspects of a new notion of architectural typology: the 'open typology'. The adopted method is grounded in the one-time post-occupancy evaluation (POE) framework,[21] which untangles the activities and goals of the people using the building. Additionally, a POE provides observations on how the building performs post-occupation to reveal single aspects of its physical settings.[22] To ensure that the study continued to preserve parallels with the architectural profession, while remaining grounded within the chosen POE method, the data collection is divided into three parts: *thinking*, *making* and *living*. These verbs/phases, central in any design process, strengthen the idea of an architecture that can be produced appropriately and that can only be understood through them.[23]

Thinking, Making and Living Framework

The *thinking* phase explores the conceptual design process, including the case study care model. It includes a systematic study of all the available publications related to Humanitas Deventer. Simultaneously, semi-structured questionnaires and qualitative interviews were conducted with a manager and an architect.

The *making* phase questions the actual physical setting through a case study fieldwork visit. The fieldwork visit analyses care activities and programmes, and their spatial implications. Additionally, this phase generates photograph archives. Post-fieldwork then examines the case study through the available design tools, such as schemes, configurations, plans and sections.

The *living* phase reveals the relationship between the inhabitants, the built context and the surrounding context. Two main research activities attempt to document the interactions, and the inhabitants' daily experiences within the case study. The first activity is interviewing. Semi-structured questionnaires and qualitative interviews with residents (four older adults and four students) and caregivers (four paid professionals) were carried out. The second activity is behavioural mapping, interpreting occupants' daily activities occurring in a four-hour period.

Participants

Older residents: the inclusion criteria for interviews/semi-structured questionnaires were: (1) male or female over 65 years old; and (2) a diagnosis of dementia (early stages). Exclusion criteria included a lack of full mental capacity.

Young residents: the inclusion criteria for interviews/semi-structured questionnaires were: (1) male or female over 18 years old; or (2) enrolled student at Saxion University (Deventer).

Staff/manager: the inclusion criteria for interviews/semi-structured questionnaires were: (1) a male or female over 18 years old; and (2) a professional caregiver/manager at Humanitas Deventer for more than one year.

Architects: the inclusion criteria for interviews/semi-structured questionnaires were: (1) a male or female over 18 years old with a master's degree in architecture or urban design; and (2) leader or member of the design team who designed Humanitas Deventer.

New Social Settings

Of particular concern for our contemporary context is shifting demographics. By 2050, people over 60 will constitute 22 per cent of the global population. As a result, the number of people with

dementia globally potentially will reach 115.4 million.[24] While in line with European tendencies, the Dutch situation is different in numbers. Adults over 65 are already 16 per cent of the population, and it is expected that they will exceed 26 per cent by 2050.[25] Dementia has been diagnosed in 1.47 per cent of the Dutch population. By 2050, this is likely to rise at the same rate as for other European countries.[26]

The changing demographic structure has been accompanied by shrinking household size. Historically, the household was defined as the space occupied by a family, with the complexity of its relationships. In this paper, the term 'household' therefore refers to those living in the same dwelling, including dependent children of all ages. In this context, the socio-economic and demographic domains have had direct implications:[27] households have shifted from being shared multigenerational spaces to being disconnected spaces occupied for a longer time by older and isolated parents.[28] The Dutch household has shrunk in size from an average of 7.7 members in the nineteenth century to 2.28 today.[29]

Inevitably, these changes in demographic and household structures have had economic and social repercussions. In particular, the Dutch health-care system has been under stress. For example, there is an increasing request for higher dependency health and care services, while treatment costs are rising dramatically.[30] This results from a common desire among older Dutch adults to be independent and live in their own homes for as long as possible.[31] To support these desires, while tackling the challenges of an ageing population and changing household structure, a shift in care models is required. Investments in human capital are central to this shift.[32]

The Historical Precedents of Housing and Care Models in the Netherlands

The Dutch care and housing models have embodied the approach of the welfare state.[33] They were either underpinned by a religious background, such as Protestant, Roman Catholic or Jewish, or had a humanistic basis.[34] Historically, the Dutch system was based on the Bismarckian model. It combined public funds and private health insurance to cover the expenses of the health-care system. The first nursing home was established in 1929.[35] From this, the Dutch government adopted a series of policies that primarily supported the institutionalisation of older adults, while their normalisation and mental and physical well-being was considered only secondarily.[36] On the one hand, policies such as the 1967 Exceptional Medical Expenses Act and the 1971 Hospital Provision Act determined an increase in the number of institutionalised settings, such as nursing homes and hospitals with geriatric programmes.[37] On the other hand, policies such as the 1998 Health Insurance Restructuring Scheme and the 2015 Health Insurance Act suggested a more specific differentiation of the housing models. The spectrum, therefore, was more clearly framed according to the level of care provided and a renewed awareness of the changing demographic structure and its socio-economic and health-care implications[38] (Figure 1).
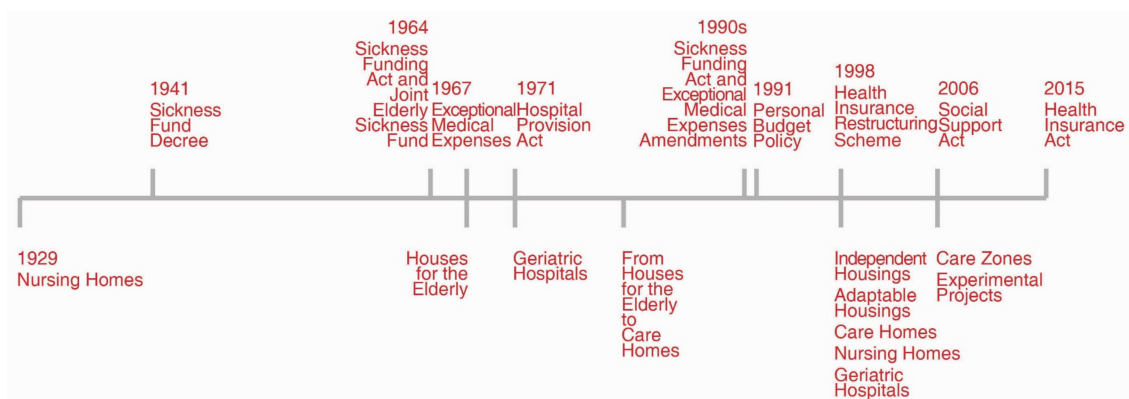

Figure 1   Architectural and care models timeline, © Davide Landi.

The settings were independent housing, adaptable housing, care homes, nursing homes and geriatric hospitals, depending on the level of care required.[39] Independent housing offers home-care and other community activities. Adaptable housing offers intermediate facilities such as shelters. This provides

catered private accommodation for older residents, as well as some common spaces such as common multipurpose rooms and a gym. Care homes, nursing homes and geriatric hospitals are more institutional facilities for older adults, who may require a medium level of care provision. Even older adults will probably require a higher level of care provision.[40]

Furthermore, these policies attributed to local authorities such as municipalities additional responsibilities regarding care services (for example, medical aids, home modifications, services for informal caregivers, preventive mental health care, and transportation).[41] In this context, the housing models for older adults acquired more flexibility and thereby proposed alternative solutions (Figure 2).
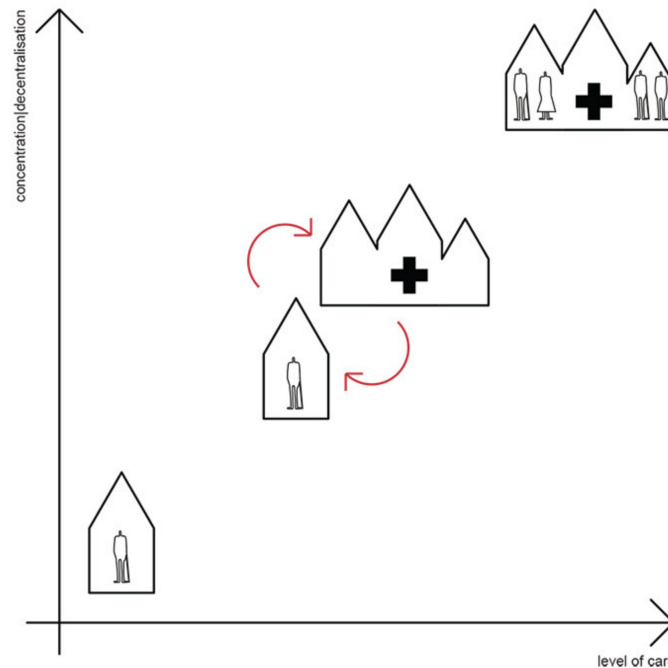

Figure 2   Flexibility of different care possibilities, © Davide Landi.

Examples are the Wiekslag Krabbelaan in Baarn and the Weidervogelhof in Pijnacker-Nootdorp. The former project emphasises interaction with the surrounding community and neighbourhoods. It therefore provides a familiar and secure environment for residents with dementia. The latter project includes nine buildings for older adults with intensive long-term care needs, which are scattered throughout the neighbourhood. They are managed by a collaboration between housing associations and a care provider.[42] Nowadays, there are around 490 nursing homes, 1,131 residential homes and 290 combined institutions for older adults.[43]

Facilities such as independent housing, housing for older adults and the new more flexible settings are not isolated interventions; they are always part of an urban scale approach. Promoted by national, provincial and municipal authorities, these are generally called 'care zones'. This defines areas in urbanised settings in which an above-average package of care and services can be guaranteed within 500 metres of a dwelling.[44]

What Is Type?

To introduce the discussion surrounding the typological approach, I refer to the work of two theorists whose theories about architecture could be tested through construction. First, Rafael Moneo, who criticised the modernist approach to architecture, which made obsolete the use of architectural typologies.[45] Second, Aldo Rossi, who supported a massive campaign on the typological approach to design during his career. In particular, Rossi made a clear differentiation between the notion of types and one of models. Types come before the forms of buildings, which change through time and contexts; models set the execution and therefore the repetition of forms as they are. While the outcomes of a model resemble one another, the

results of a type do not. This lets a work of architecture be susceptible to infinite variations, although the type ensures continuity with the collective memory and collective intellect in the making of the urban environment.[46] If Rossi's theories on architectural types were, in part, affected by a latent idealism – a tendency to the totalitarian[47] – Moneo's ideas also imply a certain kind of idealism inherited from Italian neo-rationalist architecture, although the Aristotelian reference mitigated it.[48]

In the same period, Christopher Alexander contributed significantly to the discourse of architectural types. In his first published work, *Notes on the Synthesis of Form*,[49] he recognises the necessity of a conceptual framework concerning processes and results to approach rising socio-economic and functional complexity. According to Alexander,[50] architects aim for a 'clarity of forms'. This is possible through a rounded understanding of the functional problem that is posed by the socio-economic context. Inevitably, it establishes a contradiction between the self-conscious attitude of architects towards the problem, and the unselfconscious attitude of the contexts in which the functional problem is found. By the definition of a shared symbolism – language or patterns – a new equilibrium is revealed between the two attitudes.[51] If *Notes on the Synthesis of Form* identified the necessity for a shared symbolism, *A Pattern of Language*[52] suggested such a symbolism. Alexander's theoretical endeavours proposed convenient tools to bridge the gap between the spatial and social, natural and artificial dimensions of a work of architecture.[53] By cataloguing unselfconscious variables, the author identified 253 patterns, such as 'sunny places, warm colours, front door bench', 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, the better will be the quality of any work of architecture.[54] The idea of cataloguing to distil common themes is found in another publication of those same years. Nikolaus Pevsner 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. Pevsner's typological analysis, however, cannot be fully understood without an acknowledgement of the social context in which each type has developed over time.[55] Certainly, Alexander and Pevsner's arguments were influential upon following generations of architectural theorists and historians. The study by Markus[56] is a remarkable example. In his book *Building and Power*,[57] he explores a classification and a language to locate different buildings in their social contexts. He did not consider them as economic, art or technical objects, but as translators of social changes. For Markus, therefore, 'people, knowledge, and things' were the three generative themes of works of architecture.[58]

To conclude this section, I refer to the work of three contemporary theorists whose theories have been tested through constructions. Go Hasegawa, Kersten Geers and David Van Severen stand in a renewed position towards history, and therefore types.[59] In their works, types become a tool of experience and experimentation beyond the meaning that they can embed.[60] Consequently, the typological approach is still a valuable tool in contemporary architectural practices.[61] Nevertheless, each of these authors interprets the notion of types differently, although their contributions to the theme helps to distil what types may be in this paper. Types, in fact, are general principles that reject functional classification or patternisation. They inform physical forms of buildings by embodying socio-economic changes. In this study, they refer to: the new demographic structure; the rising number of older adults with long-term conditions; the spiralling cost of long-term health-care services; and the shrinking household structure constituting the socio-economic changes. Alexander[62] named all these unselfconscious agents and challenges, which are peculiar to our contemporaneity, as a 'culture'. Consequently, what are the general principles that characterise architectural types for our contemporary culture? In terms of this, the next section gives critical insight into the open system theory, both at the urban and at the architectural scale.

Open Systems: The Open City Versus the Open Typology

In the seminal 1960s' book *The Death and Life of Great American Cities*, Jane Jacobs[63] evaluated critically the urban impacts of a process driven by diversity and density, which resulted in many packed, narrow and sometimes dark streets and squares. The findings later allowed Jacobs to frame the notion of the 'open city'. While it exposed the negative effects of zoning and single-use development, the open city addressed unconventional strategies for urban development. By embracing the complexity of streets as public spaces, and the strategic role of preserving some historic buildings to guarantee a certain continuity with collective memories and urban identity, for example, cities would preserve their regenerative capacity. This creates cities for everybody, or cities that can provide something for everybody, because everybody creates them.[64] In the same vein, Aldo Rossi[65] published *The Architecture of the City*. As with Jacobs's contribution, it was a manifesto against total planning and zoning. In particular, Rossi did not accept the notion of functionalism as a tool to bring forms together; it would reduce the city to a simple agglomeration in which citizens experience it according to what function they exercise. The city would become an organisational problem in which are located more or less important functions. Conversely, Rossi described the city as a work of art in the sense of its diversity, uniqueness and quality. He argued that the city was designed collectively, rather than imagined individually. In this, Rossi attributed to the city the capacity continuously to renew and reform itself, as did Jacobs. Rossi went on to propose two generative elements of the city: 'types' and 'events'. Types are the logical principles that pre-empt buildings' forms. Events come after types, and reflect the collective will of citizens. The commitment of architects to architectural types and events should ensure a certain continuity with the collective memories and intellect of existing urban settlements. Despite the different views that Jacobs and Rossi had on the notion of the city as work of art, they converge when collective human agency is acknowledged in the making of the city, and thereby of architecture.[66]

Rossi's analogy of a city as a work of art allows me to refer to Umberto Eco's 1989 book *The Open Work*.[67] For Eco, the openness that differentiates a work of art from the closedness of any other object lies in three main points. First, an artwork generates continuously a new relationship with the audience. Second, an artwork therefore produces multiple interpretational perspectives in the audience. Third, the artwork intends to trigger the audience's contribution in its completion, not in its unfinished nature. Similarly to Jacobs's[68] and Rossi's[69] arguments about the city, Eco recognises an invitation to the audience to make the work of art with the author. Jacobs's innovative research into the density of the city was widely adopted by theorists such as Rowe and Koetter, and professionals such as Koolhass. Colin Rowe and Fred Koetter's[70] *Collage City* proves an equal theory of the necessity of a city that embeds the 'nostalgia for the future' and the 'theatre of memories'. The authors propose the technique of collage, which allows designers to layer coexisting sets of data about a place. This would produce a map that 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, works of architecture present a certain degree of continuity with the social context.[71] Koolhaas's object of interest was New York. His 'retroactive manifesto' on *Manhattanism*[72] recognised New York as the archetype of a new city. It combined paradoxically 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.[73]

In recent years, Sennett, while criticising zoning and single-use development policies – the 'closed city' – more precisely framed Jacobs's notion of the open city as an urban strategy. The open city is not a consequence of a vision, but the comprehension of the reality.[74] It means that the city is the result of a participatory process, not of planning.[75] Furthermore, Sennett translated these characteristics into four architectural or urban principles.[76] The first is the 'passage of territories'. Boundaries are both resistant and as porous as cell membranes. Boundaries therefore become borders. They are not any more the edge at which things end; they are the edge at which people interact.[77] The 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. Third is the 'development of narratives'. This unfolds a particular work of urban design or architecture as 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 (for example, Nehru Place in Delhi, India – the 'Delhi Silicon Alley').[78]

Nevertheless, Sennett's writings show a lack of examples of 'open systems' on the architectural scale. In *Building and Dwelling: Ethics for the City*,[79] he refers to the 'type-form' as a dynamic inception, which 'sets the terms for making a family of possible objects', citing the Barcelona grid plan as an exemplifying case. This is complemented by the historian Esra Ackan's[80] work. In her book *Open Architecture*,[81] she provides a number of precedents. Speculative projects such as Price's Fun Palace (1961–5), Tange's Tokyo Bay Project (1960) and Friedman's Mobile Architecture (1956) embodied notions of flexibility and adaptability of forms against traditional and centralised systems, while collective projects such as the IBA-1984/87 in Berlin reveal other facets of an open architecture underpinned by theories of collectivity and collaboration, a multiplicity of meaning, democracy and plurality, expansion of human rights and social citizenship, and transnational solidarity. An alternative group of minds is welcomed into the thinking, making and thereby living of a work of architecture. The inhabitants, therefore, are subjects rather than passive objects.[82] While Akan[83] focuses on 'latent forms of open architecture', this confirms a knowledge gap in the architectural discipline that is concerned with *types* of open architecture, which are prior to open forms of architecture. Therefore, it is possible to anticipate that architectural types for our contemporary culture – the open typology – are not only prior to forms and experiences, although their notion promotes multidisciplinary, collaborative and socially inclusive design principles, and thereby order, by embodying the open system theory. To support this, the following section illustrates empirically Humanitas Deventer as a case study.

The Humanitas Deventer Test Site: An 'Open Typology'?

Humanitas is a nursing home designed and built in the 1960s by Architectenbureau Wim Knuppel. Sited on the northern outskirts of Deventer, Humanitas is a five-storey building. The urban plot is defined by a park with a lake on the east side, and residential blocks to the south, west and north. It embodies many features that are peculiar to the Dutch functionalist movement – the *Nieuwe Bouwen*. The movement lasted for two decades (1920–40), although it influenced significantly the following generation of architects. For example, the prevalent materials of Humanitas are brick, glass, concrete and steel. The architectural composition emphasises the horizontal dimension, which is interrupted by vertical elements such as internal or external staircases. Additionally, the building adopts an abundant use of fenestrations. The details are essential, while extremely refined, in both external surfaces and interior spaces. The plan accommodates spacious communal rooms. These translate an idea of an architecture that fosters hygiene, natural light, fresh air and space for collective and recreational activities. The external form becomes less relevant than the practical use of a building, with a potentially positive effect on inhabitants' well-being (Figure 3).[84]

Figure 3   View of the main entrance of Humanitas, © Davide Landi.

In 2012, the Dutch government reduced the economic funding for older adults' care. As a result, the CEO of Humanitas had to dismiss a significant number of professional caregivers, with negative repercussions on the care model provided. At the same time, the building regulations for older adults' health-care facilities were modified. For example, the minimum size for rooms/apartments was increased to 35 m^2. The Humanitas CEO decided to develop a new care model in partnership with academia (the School for Business and Society – TIAS) grounded on notions of interdependence, respect and social-relational reciprocity. It is a care model focusing on the quality of life and well-being of residents, fostering residents' independence in what they are still able to do.[85] Following the reduction in economic resources and the new care principles, Humanitas underwent a refurbishment process throughout. Pairs of single rooms were joined together, and the communal/social spaces were maximised. This created communal/social spaces that facilitate possibilities of encounters and social interaction. However, a few apartments were left empty because they do not yet satisfy the minimum spatial requirements. The Humanitas CEO opened the doors of the nursing home to university students, occupying a niche left by the Dutch government, which was not able to provide affordable student accommodation.[86]

Theming 1: Redefining the Notion of Typology

The 1964 Dutch functionalist building set a new balance within the Dutch socioeconomic context, defining a unique architectural frame, a type based on different principles that fall within Sennett's 'open system' theory.[87] In detail, Humanitas behaves as a 'membrane'. Its institutional settings provide a safe and protected environment, while it is a permeable and 'porous' building that is able to accommodate different activities.[88] A diverse population (older adult and young residents, professional caregivers, young professionals, volunteers), as well as diverse activities, confirm an openness towards the surrounding community. For example, there is an interior 'shopping boulevard', with a supermarket, a cafe/pub, a hairdresser, a library, a Wellness Centre, a beautician and a physiotherapist. There is also an 'entrepreneurs' hub', which hosts a tattoo-removal lab, and a social enterprise, which provides social support to Deventer's citizens. Additionally, one of the students started a 'research lab'.[89] These inevitably generate a 'passage of territories' and attribute an 'incomplete form' to Humanitas.[90] The maximisation of the social/communal spaces, and the outdoor formal and vegetable gardens, inevitably develop 'narratives' in which multiple informal interactions such as parties and meetings occur.[91] On the one hand, the students teach the use of technologies to older adults (social networks, tablets, email and so on), or prepare simple meals to share. On the other hand, older adults tell the students their life experiences or teach traditional hobbies (such as playing guitar). Furthermore, 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 go by.[92] Over time, older adults in particular, who are affected by mental and physical impairments such as dementia, can exercise their 'interiority as a particular relationship with the world',[93] or their exteriority through interaction with other groups of people. These allow a person to better comprehend himself or herself, and be 'connected yet distinct'.[94] In this bilateral relationship, 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.[95] Humanitas, therefore, inevitably becomes a 'democratic space'.[96]

Nevertheless, the physical settings present some limitations. For instance, the size of apartments/rooms might reveal the institutional character of Humanitas.[97] The small number of lifts generates long queues after meals. A double-height multipurpose room usually accommodates a large number of residents during the day and for special events, which can cause crowding and noise that impact on older adults' mental well-being. Additionally, each floor has very long corridors, which means tiring walks for professional caregivers and volunteers, and the surrounding gardens are not easy to access for residents living on upper floors[98] (Figure 4).
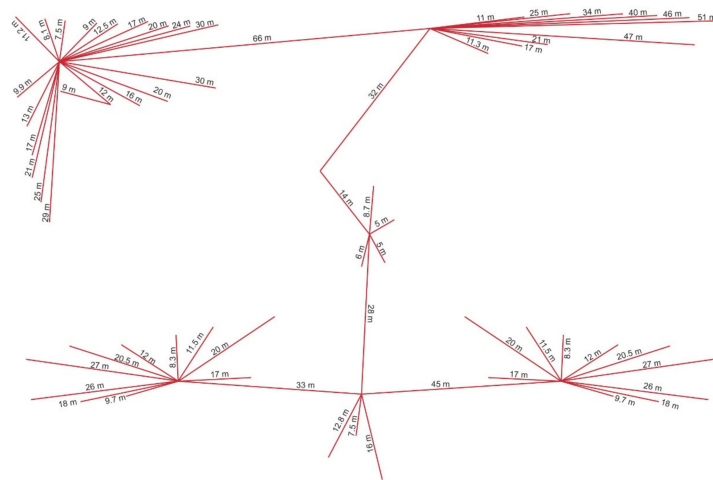

Figure 4 Architectural distances, © Davide Landi.

Theming 2: A New Paradigm of Care

Humanitas successfully combines social and health care, subverting governmental difficulties and relevant expenditure in doing this.[99] With its 166 older adult residents, 200 volunteers, 200 professional caregivers and 6 students, Humanitas represents an example of a new paradigm of care, as described in 2012 by the World Health Organisation (WHO) report. This underlined 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.[100] It offers a new way of sharing responsibilities that is also defined by Feddersen and Ludtke as 'caring communities'.[101] The collective sense is strengthened by the equal relationship between volunteers, caregivers, students and older residents (Figure 5).[102] The social and professional networks that surround Humanitas have positive effects on its informality and on residents' well-being, in particular for older adults.[103] The absence of any relational obligation among the different groups diminishes older adults' vulnerability. Spontaneity and freedom foster their embeddedness and participation within different networks.[104]
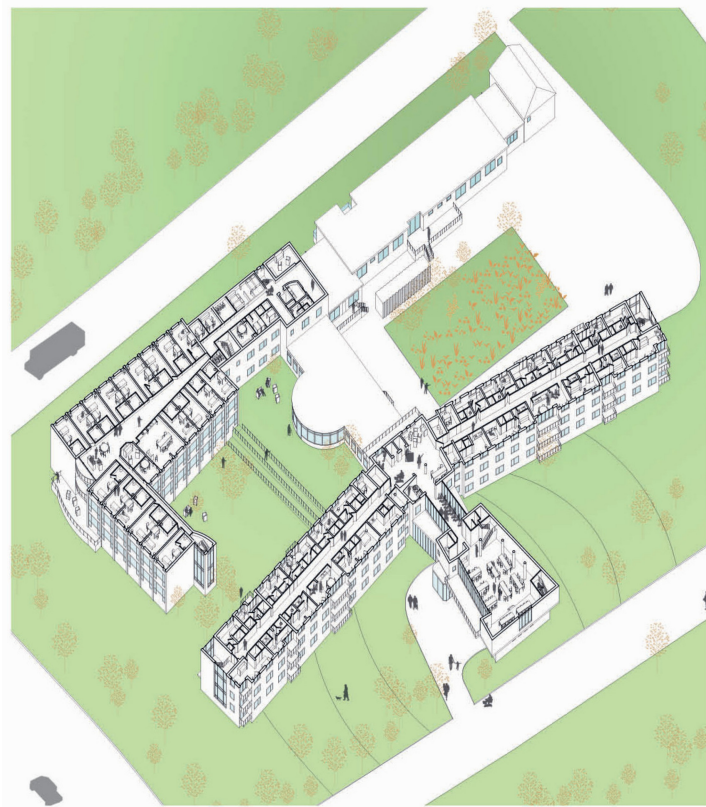
Figure 5 Axonometric view, © Davide Landi.

The unusual informality, spontaneity and freedom make older adults feel comfortable after moving to Humanitas.[105] This reduces the common concern about leaving their homes and moving into a more institutionalised setting.[106] The same informality can also be found in the admission process for students. Students contact the facility through Facebook. After a brief interview with staff members and the manager, a student is taken around the nursing home to understand how to interact with older residents. Students must not be studying in a nursing or medical school, because they should bring the 'outside contemporary world inside'.[107] Students help to create a natural and enjoyable environment by talking about the positive aspects of life instead of focusing on problems.[108] Once chosen, students are invited to attend the first aid, fire security and other panic situations courses. In Humanitas, they have free accommodation with no restriction (they can organise parties, let their friends sleep over and so on) in exchange for 30 hours per month of social works, such as teaching the use of technology, as described above.[109] For instance, one of the students came back home with three girls late at night. Looking around for a toilet, he set off the fire alarm. The CEO did not take any action, so as to remain consistent with the principles of Humanitas.[110]

The provision of care to older adults with mental and physical impairments requires extended working time and effort. The simple presence of the students and volunteers lightens this burden. For example, when a resident with dementia exhibited difficult behaviour, one of the students helped a professional caregiver to calm the woman down. A similar situation occurred with another student who came home after a night out. He met one of his neighbours who had Alzheimer's disease. He led her by the hands upstairs, and together they had a glass of wine. Afterwards, he took her to her apartment.[111] Consequently, students develop caring and social skills, and learn how to handle difficult situations. They become 'good adults'.[112]

Furthermore, the robust social network has a direct and positive influence on older adults' mental health, functional decline and ageing process.[113] Geriatric specialists who have been seeing the older residents of Humanitas found that this care model slows down the advancement of Alzheimer's disease and depression, and reduces blood pressure.[114]

Conclusion

This paper has illustrated how the contemporary Dutch socio-demographic and economic contexts (ageing population, the rising number of older adults with long-term conditions, the spiralling cost of long-term health-care services, and shrinking household size) have affected older adults' care provision, and therefore its architectural frame. Humanitas is the result of an informal, adaptive process that produced a more inclusive, and democratic space.[115] It is a space characterised by a robust and mixed social network, which may contribute to developing new abilities (for example, the use of smartphones, computers, the internet and email), and preserve old ones, as well as enhancing mental and physical well-being.[116] Young and old inhabitants' life experience, therefore, is positively affected. In this case study, the social patterns are supported by 'spatial structures'[117] that echo past household composition.

Besides its physical restriction, the sociological and therefore spatial comprehension of Humanitas Deventer serves as an exemplifying case for the definition of more socially inclusive architectural types. The 'open typology' is grounded in Sennett's and Akcan's theories about open systems[118] to translate changes and challenges in contemporary culture into architecture. This generates social growth. The adoption of an alternative approach to architecture forces architects to think of and make architecture as a medium for the exploration of participatory strategies, and the creation of synergies concerning different domains.[119] The 'open typology', however, not only implies the use of collaborative and socially inclusive design principles; it imposes a multidisciplinary, collaborative and socially inclusive order as a result. In this paper, this is represented through a diverse version of older adults' long-term care facilities, which usually are underpinned by hierarchical decision making, and efficiency.[120] In the British context, the housing market mostly targets families or young professionals, and many dwellings are left unoccupied.[121] This reveals a general urgency to increase the provision of new housing. Humanitas, and therefore the 'open typology', may generate a type of housing stock lacking in Western countries.[122] It is of interest to open-minded people, and is a real alternative to the well-known possibilities.[123] Consequently, institutions and governments should contribute to the economic and political backing to support these initiatives.

Acknowledgements

Declarations and Conflict of Interests

The author declares no conflict of interests with this work.

Notes

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