SATURDAY, APRIL 13
SESSION 9
10:00 - 11:00

ROOM C - SALA DE VIDEOCONFERENCIAS

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Community-based Architectures for the Elderly: Towards the Integration of Healthcare Spaces with Nature

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Exterior view of Health Care Facility Josefhof, designed by Dietger Wissounig Architekten, Austria, 2019. © Paul Ott
This project integrates the building into the surrounding landscape, aims to create an atmosphere of harmony between nature and people.

The research on care and cure has received much attention in recent years due to the increasingly integrated research on the global aging problem and the unprevented epidemic, including research in architectural design. For instance, the publication of Murphy, Mansfield, and Barber (2021), titled *The Architecture of Health: Hospital Design and the Construction of Dignity*, presents a comprehensive introduction to the evolution of healthcare architecture, which assists in recognizing the significance of the hospital as a space of dignity. Additionally, the book *Architecture for Residential Care and Ageing Communities: Spaces for Dwelling and Healthcare*, edited by Gromark and Andersson (2021), explores and articulates new qualities in the designs, caring process, and healing atmospheres of aging residential care and aging communities. Architects have been called to address the fact that many of us have been compelled to take up new forms of care, "from mutual aid to social distancing and self-isolation." (Chatzidakis et al. 2020, 10-11) It is envisaged that care is centered on the well-being of individuals, and the bodies of carers and patients would constantly form new and evolving relationships with each other and the spaces around them (Lange and Schaad 2022). In addition, there has been a dramatic change in expectations and demands among the elderly, who are seeking a different healthcare approach and new policies that encourage and support healthy aging, such as in the field of palliative care (Dwight 2017, 26). In this realm, numerous architectural experiments have regarded facilities involved in therapeutic community-based environments.

Moreover, aiming to study the principles and practices that underpin the design of spaces for community healthcare, several specific euro-centric case studies have been selected, aiming at finding their correspondence in examples of aging community healthcare, referencing the categorization illustrated in the book *Living for the Elderly: Principles and Processes* (Feddersen and Lüdtke 2017). The aging community healthcare spaces will be studied, in this research project, through the lens of domesticity, drawing upon housing complexes for the elderly and institutions such as community healthcare centers, rehabilitation centers, or Alzheimer's day centers. The project will include a body of paradigmatic design references named "Case Studies Abaci," aiming at the collection and classification of contemporary architectural projects that align with the aforementioned typologies. The case study analysis will examine three thematic categories through a typological and analytical lens, generating comparative plans of "envelope," "in-between space," and "promenade." These investigations will provide a comparative experiential analysis of the spaces concerning the organization between internal and external environments, as well as the division between artifice and nature.

In addition, a series of experimental field studies, centered on the aging community healthcare system in Europe, will be conducted, integrating the results of observation, onsite documentation, and analysis. Besides the contemporary architectural projects listed in the "Case Studies Abaci" section, some community-scale historical projects will also be considered, such as Sanatorium Zonnestraal (Jan Duiker and Bernard Bijvoet, 1925-1931), l'Eau Vive hospital (Nicole Sonolet and Philippe Pajmelle, 1960s), and the De Drie Hoven housing complex for the elderly (Herman Hertzberger, 1964-1974). Furthermore, after a closer look at the role of biophilic design in spaces for aging community healthcare, a practical project will be conducted and serve as a test-case and real-world application. Upon redefining a paradigm and formulating standards for a given practice, distinct implications might be made under various design scenarios to establish an interactive aging community paradigm.

These parts will follow an introductory narrative analysis of a typical description concerning the etymology and notions of "care," "biophilia," and "community health" (Yanacek 2023; Wilson 1984; Goodman, Bunnell, and Posner 2014). In addition, a collection of state-of-the-art literature linked to "care, nature, and architecture" is systematically explored, entitled "Lessons from Hospital: Care as Active Practice," "Inspirations from Community: Care as Interactive Paradigm," "Biophilic Design Practice," as well as "Architecture and Nature Integration," respectively. It is increasingly important for architects to think inter-disciplinarily. For instance, the theories of the body and brain are interwoven with architectural discourse; "constructing the architect as a kind of doctor and the client as [the] patient" has always been tightly connected (Colomina 2019, 13). The recent publication entitled *Care* aims to demonstrate the intricate relationship between the discourses of architecture and care from various perspectives (Lange and Schaad 2022).

The investigation of architecture and nature integration has also long been a focus of contemporary architectural and urban design. The "Biophilia Hypothesis" was systematically proposed by Wilson (1984) and has been investigated as a potential strategy for exploring spatial ecology and human health. Recent academics Kellert, Heerwagen, and Mador point out that the goal of biophilic design is not about adding more visual interests or greening our buildings solely, but about "humanity's place in nature, and the natural world place in human society, a space where mutuality, respect, and enriching relation[s] can and should exist at all levels and emerge as the norm rather than the exception" (2008, 7), which underlines the significance of articulating a paradigm change in how we design and develop with nature in mind.

Healthcare architecture and nature gradually become an integral part of the architectural discourse and practice, drawing attention to the point of transitional spaces and guidelines. Ulrich observes biophilia theory and selectively reviews scientific research pertinent to designing healthcare settings that reduce stress and promote better health outcomes (Kellert, Heerwagen, and Mador 2008, chap. 6, 87). More recently, a phenomenal understanding of biophilic design guidelines has been drawn upon, with "[f]our biophilic patterns – Biomorphic Forms, Dynamic and Diffuse Light, Material Connection with Nature and Mystery – were primary to the design." (Browning and Ryan 2020, chap. 9, 180-181). In the "Introductory Note" to the volumes edited by Pasquale Miano (2020), Capuano points out that the research "address[es] the crucial issue of care structures and their relationship with the urban context" (2020, 13), which examines innovative architectural approaches to the configuration of care and healing spaces and their relationship with nature.

Although biophilic design has been applied and explored in many design contexts over the last few decades, little attention has been paid to developing theoretical and design approaches to community healthcare facilities against the backdrop of aging. So how do we redefine the space of community healthcare? What are the present forms of community healthcare facilities? How can we establish an effective design and theoretical framework for the spaces of community healthcare through the integration of buildings with nature? To answer these questions, the design-driven approach will be applied throughout the project.

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Experimentation

The design-driven methodology is used throughout this project. As a proven research strategy, "experimentation" is widely conducted in different phases. In the first phase (speculation), a collection of state-of-the-art literature linked to healthcare architecture and nature integration is systematically explored. An experimental, comparable review of the different pieces of literature plays an important role in developing an awareness of hypotheses and, latterly, posing research questions on the integration of research on spaces for aging community healthcare with nature. In the second phase (reflection), several specific case studies have been selected, aiming to find their correspondence in examples aligned with the aforementioned literature. The artifact of the case studies will be summarized in the form of abaci, providing a comparative experiential analysis of the spaces between the interior and exterior based on three categories. This kind of comparing, diagraming, and generalizing practice reveals the study as an experimental design action. The third phase (evaluation) draws attention to the experimental field research and the project practice. The field research will provide the potential to perceive the complexity of different interconnections between architecture and nature through in-depth observations. Project practice provides insight into the effectiveness of the strategy, which will allow me to recognize some potential unnoticed issues. The fourth phase (interface) will generate the final definition for the paradigm and formulate standards under a variety of design scenarios. The interpretational methods and design experimentation in different field actions will thus allow me to test the design hypotheses.