
KNOWLEDGE CREATION BY PHD RESEARCH IN ARCHITECTURE AND LANDSCAPE ARCHITECTURE

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Introduction

The purpose of the following inquiry is to provide an overview of the production and augmented understanding of the knowledge creation of doctoral dissertations within the research field of architecture and landscape architecture in the Nordic countries during 2024. There are altogether fifteen universities in Denmark, Finland, Norway, and Sweden that have doctoral programs to produce doctoral dissertations in architecture and in landscape architecture. To date, there is no university in Iceland that has a doctoral program for examining dissertations in architecture and landscape architecture, and based on that fact, Iceland is not included in the overview. There is a global classification used by the United Nations (UN) and the Organization for Economic Co-operation and Development (OECD) for the collection and reporting of data on research and development in research topics, where the definition of research areas represents a top-down approach. Architecture and landscape architecture research fields are international, and similarities are thus easy to observe. However, each university in Denmark, Finland, Norway, and Sweden has its own PhD program for undertaking doctoral dissertations in architecture and landscape architecture, and the research topics are consequently broad and vary widely.

Two observations can be made regarding how the field for knowledge production through PhD studies is described at Nordic universities. On the one hand, architecture and landscape architecture are umbrella concepts for the research field. The outcome of the PhD program is a dissertation in either architecture or landscape architecture. On the other hand, there are PhD programs that offer specialization. In this case, the research field may be divided into sub-areas at universities, and the dissertation can in this case consequently have subtitles providing information about the content. For example, the PhD programs at KTH/Architecture provide clarification of dissertations in architectural design, technology and representation, architectural theory, history, critical studies, urban design, as well as urban design and urban theory.¹ At Tampere University, PhD students can choose between architecture and urban planning and design.² At Chalmers University of Technology, the PhD program for architecture includes the following sub-areas: architectural history and architectural theory, design, sustainable development and urban development, management and building processes, building technique and materials, housing, built environment, and renovation.³ Because of specializations and local governance, the boundary of the research area may thus vary slightly among the universities.

1 See <https://www.kth.se/en/studies/phd/general/programmes-1.325286>.

2 See <https://www.tuni.fi/en/study-with-us/doctoral-programme-built-environment>.

3 See <https://www.chalmers.se/en/research/we-train-new-researchers/graduate-schools/architecture/>.

As editors of the *Nordic Journal of Architectural Research*, we have striven to find the correct number of doctoral dissertations produced in 2024 at schools where architectural research is conducted in Denmark: Aarhus School of Architecture, Royal Danish Academy, and University of Copenhagen in Denmark; in Finland: Aalto University, School of Architecture at Oulu University, and Tampere University; in Norway: the Bergen School of Architecture,⁴ Oslo School of Architecture and Design (AHO), Norwegian University of Life Sciences (NMBU), and Norwegian University of Science and Technology (NTNU); and in Sweden: Chalmers University of Technology, Royal Institute of Technology (KTH), Lund University, Swedish University of Agricultural Sciences (SLU), and Umeå School of Architecture. Of the architectural/landscape architectural schools listed above, three of them did not produce any PhD dissertations during 2024. The PhD dissertations produced at the remaining schools are presented further below, including information about the title, author, and link to the dissertation.

4 The Bergen School of Architecture has no PhD program.

The reason behind this mapping of ours is not merely curiosity. It is based on the assumption often posited among colleagues in academia that PhD research constitutes the main driving force for renewal and research innovation. It has a strategic value for future research explorations perhaps also as a singular contribution on an international level of critical design research in architecture. Based on the UN and OECD classification of research areas, we found thirty-two dissertations in architecture, while a total of nine doctoral dissertations in landscape architecture were identified. Dissertations produced outside the schools

of architecture and landscape architecture are not included in this summary. In total, we have thus identified forty-one doctoral dissertations in architecture and landscape architecture at Nordic universities.

What was surprising was not the number of dissertations, but the differences in the way the universities document and publish the PhD projects and dissertations on their homepages. In some schools of architecture and landscape architecture, the correct information was easy to find and clearly reported. However, at others, the doctoral dissertations in architecture and landscape architecture were made almost invisible on the homepages or to be found required searches on their websites. A follow-up email to scholars responsible for the PhD programs was needed in order to find the correct information. A handful of the dissertations were published as locked PDF files on the universities' websites. For these publications, only abstracts are made available through gold open access.

Dissertations in Architecture and Landscape Architecture

DENMARK: In 2024, altogether thirteen dissertations were produced in architecture and landscape architecture. The following dissertations were produced at the Aarhus School of Architecture, Royal Danish Academy, and University of Copenhagen in Denmark:

Aarhus School of Architecture

Author: Heidi Sørensen Merrild

Title: *Reversible Tectonics*

https://adk.elsevierpure.com/ws/portalfiles/portal/84551776/RT_final_270824.pdf

Royal Danish Academy

Author: Xan William Brown

Title: *Architecture and (Waste) Wood Agency: Integrating material traits into new circular approaches*

https://adk.elsevierpure.com/ws/portalfiles/portal/84374835/240327_150dpi_Xan_Browne_Thesis_Digital_Pages.pdf

Author: Maja Zander Fisker

Title: *TRANSPOSITIONER Transmedial praksis i arkitektuddannelsen*

https://adk.elsevierpure.com/ws/portalfiles/portal/83249055/Transpositioner_ph.d.-afhandling_af_Maja_Zander_Fisker_31.10.23.pdf

Author: Line Kjær Frederiksen

Title: *ADSKILLELSENS TEKTONIK: Cirkulære principper undersøgt i to nutidige byggesystemer*

https://adk.elsevierpure.com/ws/portalfiles/portal/85615554/Afhandling_AdskillensensTektonik_LineKjaerFrederiksen_2024.pdf

Author: Lotte Nystrup Lund

Title: *Biocities of the Future: A study of urban developers and protesting citizens unfolding ideas about biodiversity in the Copenhagen case Fælledby / Lærkesletten*

https://adk.elsevierpure.com/ws/portalfiles/portal/83774030/94374_FINAL_PhD_afhandling_26Jan_LNL_2024_samlet_PDS_final_www_high.pdf

Author: Gabriella Rossi

Title: *Designing Small Datasets: ML modeling applications for 3D printed biopolymer composites in architecture*

<https://adk.elsevierpure.com/da/publications/designing-small-datasets-ml-modeling-applications-for-3d-printed->

Author: Camilla Jensen Thorup

Title: *Behavior Driven Practice*

https://adk.elsevierpure.com/ws/portalfiles/portal/85148969/2024_PHD_THESIS_CAMILLA_JENSEN_THORUP_BEHAVIOUR_DRIVEN_PRACTICE.pdf

University of Copenhagen

Author: Oriol García Antúnez,

Title: *Unpacking and fostering socially acceptable and just urban green space transformations*

<https://researchprofiles.ku.dk/en/publications/unpacking-and-fostering-socially-acceptable-and-just-urban-green->

Author: Johanne Heesche

Title: *Transformation of young industrial landscapes—Emphasising reuse, porosity, re-naturing and open-endedness through landscape-based transformation*

<https://researchprofiles.ku.dk/da/publications/transformation-of-young-industrial-landscapes-emphasising-reuse-p>

Author: Yu Liu

Title: *FROM ABLE TO INVITED: Integrating green spaces and active mobility planning for urban green travel environments*

<https://researchprofiles.ku.dk/en/publications/from-able-to-invited-integrating-green-spaces-and-active-mobility>

Author: Hongxia Pu

Title: *Filmic Scroll: Unfolding the Socio-ecological Futures of Desakota Landscapes in China*

<https://researchprofiles.ku.dk/en/publications/filmic-scroll-unfolding-the-socio-ecological-futures-of-desakota->

Author: Sofie Stilling

Title: *Enabling the In-Between: Conceiving and conveying the relational character of existing urban landscapes with characterization tools and film in the early stages of architectural project development in quest of strengthened care and regenerative practice*

<https://researchprofiles.ku.dk/en/publications/enabling-the-in-between-conceiving-and-conveying-the-relational-c>

Author: Hanyan Zhang

Title: *Exploration of Pocket Parks in Beijing, China*

<https://researchprofiles.ku.dk/en/publications/exploration-of-pocket-parks-in-beijing-china>

FINLAND: In 2024, eight doctoral dissertations were produced in architecture and landscape architecture in Finland. The following dissertations were produced at Aalto University and Tampere University:

Aalto University

Author: Yoon Han

Title: *Architectural computation of spatial dynamics*

<https://aaltodoc.aalto.fi/items/542f3252-a848-4e4a-bf96-5f37b9ef1f44>

Author: Hanna Hyvönen

Title: *Building (with) Pictures: The Confusing Fluency of Architectural Photorealism*

<https://aaltodoc.aalto.fi/items/6d809bfa-9860-4d4d-a79d-938f0c1d5daa>

Author: Seija Linnanmäki

Title: *Ilmastoitu? Moderni—Sisäilman hallinta sotien jälkeisessä toimitoarkkitehtuurissa*

<https://aaltodoc.aalto.fi/items/89565b5e-25e7-4150-9cbb-66e876fb5337>

Author: Eija Merenmies

Title: *Helsingin yliopiston päärakennuksen laajennuskilpailu 1931, edeltävät vaiheet ja toteutus—Kysymys yliopiston asemasta ja tyylistä*

<https://aaltodoc.aalto.fi/items/aef288a2-4513-4ccc-8c77-8b09d279579f>

Author: Pasi Toiviainen

Title: *Genius or charlatanry? A psychobiographical reinterpretation of the life and works of Buckminster Fuller*

<https://research.aalto.fi/en/publications/genius-or-charlatanry-a-psychobiographical-reinterpretation-of-th>

Author: Yizhou Zhao

Title: *Finnish Architects in China: Discourses and Practices*

<https://aalto.doc.aalto.fi/items/c5cc8173-4587-4ca8-b4d1-8cbec86fedd1>

Tampere University

Author: Katja Maununaaho

Title: *Kulttuurien kohtaamisia asuinympäristössä: Arjen kulttuurisen monimuotoisuuden huomioiminen kaupunkiasumisen suunnittelussa*

<https://trepo.tuni.fi/handle/10024/154930>

Author: Jenni Poutanen

Title: *The Learning Landscape Dimensions: The Supply and Student Preferences on Campus Premises*

<https://trepo.tuni.fi/handle/10024/154923>

NORWAY: In 2024, altogether eleven doctoral dissertations were produced in architecture and landscape architecture in Norway. The following dissertations were produced in Norway at the Oslo School of Architecture and Design (AHO), Norwegian University of Life Sciences (NMBU) and Norwegian University of Science and Technology (NTNU):

Oslo School of Architecture and Design (AHO)

Author: Tom Davies

Title: *The Architecture of the Ordinary: Redefining protection and the role of communities in the future of Brutalist heritage*

<https://aho.brage.unit.no/aho-xmlui/handle/11250/3160088>

Author: Zhipeng Duan

Title: *Soiling Service Design: Situating professional designing among plural practices*

<https://aho.brage.unit.no/aho-xmlui/handle/11250/3119436>

Author: Elisabeth Sjö Dahl

Title: *Deep landscape*

<https://aho.brage.unit.no/aho-xmlui/handle/11250/3127964>

Author: Hugh Strange

Title: *Architecture at the Building Site: Challenging the Separation between Design and Construction*

<https://aho.brage.unit.no/aho-xmlui/handle/11250/3130737>

Author: Mara Trübenbach

Title: *MATERIAL DRAMATURGY: TRACING TRAILS OF DUST IN THE ARCHITECTURAL DESIGN PROCESS*

<https://aho.brage.unit.no/aho-xmlui/handle/11250/3120720>

Author: Hannes Zander

Title: *A Landscape Approach. Reading a Geographic Context Through Multiple Dimensions: The Case of the Hexi Corridor Region in China's Northwestern Gansu Province*

<https://aho.brage.unit.no/aho-xmlui/handle/11250/3123667>

Norwegian University of Life Sciences (NMBU)

Author: Berit Rønsen

Title: *Norsk hagekunst mot et moderne samfunn—1930–50: Intensjoner og idealer i en brytningstid*

<https://nmbu.brage.unit.no/nmbu-xmlui/handle/11250/3145825>

Norwegian University of Science and Technology (NTNU)

Author: Anne-Cathrine Flyen

Title: *Polare kulturmiljøer under press. En studie av påvirkning fra menneskelig slitasje og naturlig nedbrytning i et klima under endring*

<https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/3126619>

Author: Mrudhula Soe Koshy

Title: *Running Towards the Fire: Navigating Compounded Uncertainty through Contextualised Contingency Planning during Unprecedented Flooding in Wayanad, Kerala*

<https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/3121969>

Author: Daniel Wieslaw Satola

Title: *Net zero greenhouse gas emission residential building concepts for warm climates*

<https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/3115476>

Author: Åse Lekang Sørensen

Title: *Energy profiles and electricity flexibility potential in Norwegian apartment buildings with electric vehicle charging*

<https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/3118970?show=full>

SWEDEN: In 2024, altogether nine doctoral dissertations in architecture and landscape architecture were produced in Sweden. The following dissertations were produced at the Chalmers University of Technology, Royal Institute of Technology (KTH), Lund University, and Swedish University of Agricultural Sciences (SLU) in Sweden:

Chalmers University of Technology

Author: Emil Adiels

Title: *Differential geometry and structural action of vaults and shells*

<https://research.chalmers.se/publication/539558>

Author: Jonathan Cohen

Title: *Decoding Urban Metabolism's black box—Advancements in Urban Analytics to support circular material flow*

<https://research.chalmers.se/publication/541111>

Author: Anita Ollár

Title: *Spatial Design for Circularity in Residential Buildings: Exploring the Case of the Kitchen*

https://research.chalmers.se/publication/541775/file/541775_Fulltext.pdf

Royal Institute of Technology (KTH)

Author: Lena Stina Andersson

Title: *The Entrance, the Floor, and the Tile: Unfolding Material Histories at Museum Renovation Sites in Berlin, Stockholm, and London*

<https://kth.diva-portal.org/smash/get/diva2:1857469/FULLTEXT03.pdf>

Author: Petra Lilja

Title: *Mineral Matterings: Diffractive Practices of Design*

<https://kth.diva-portal.org/smash/get/diva2:1909674/FULLTEXT01.pdf>

Author: Erik Sandelin

Title: *Design and Grace: An Ahuman Odyssey*

<https://kth.diva-portal.org/smash/get/diva2:1860317/FULLTEXT01.pdf>

Lund University

Author: Alva Zalar

Title: *Queer as a City: Unsettling coherence in “sustainable urban development”*

https://lucris.lub.lu.se/ws/portalfiles/portal/193534290/Queer_as_a_City_Alva_Zalar_digital_version.pdf

Swedish University of Agricultural Sciences (SLU)

Author: Azadeh Shahrads

Title: *Urban densification considering sense of place and environmental justice—or not*

<https://publications.slu.se/?file=publ/show&id=128763&lang=en>

Author: Mark Wales

Title: *Adolescent outdoor life and well-being*

<https://publications.slu.se/?file=publ/show&id=128762&lang=en>

Reflections

This overview focusses on doctoral studies and published PhD dissertations in the schools/departments of architecture and landscape architecture in Finland, Norway, Denmark, and Sweden. Below we present initial reflections regarding the knowledge creation by PhD students.

Firstly, the dissertations in the Nordic countries were executed as both monographs and paper-based PhD dissertations. The split between these two forms is twenty-nine monographs and twelve paper-based dissertations. For several years, there has been an ongoing debate in the Nordic research community regarding the transformation of doctoral studies from monographs to paper-based dissertations. This transformation has stopped, at least according to our inquiry and examination of knowledge creation during 2024, where we had expected a much higher number of paper-based dissertations.

Secondly, the PhD dissertations were produced both in English and in native languages: Finnish (three), Norwegian (two), and Danish (one), where the dissertations written in native languages were produced as both a monograph and a paper-based PhD dissertation. The overwhelming majority of the dissertations were thus published in the English language, resulting from a communication strategy to link their findings to an international public. This is a natural decision in a globalized world. The two research areas—architecture and landscape architecture—are both international. Nevertheless, the selection of one language can be a tricky issue, especially when the target group is national, and the research objectives have a specifically Nordic context. Being able to report findings in your native language may also be important to better transform spatial experiences into academic writings.

Thirdly, the research topics in the doctoral dissertations can be characterized as diverse. PhD dissertations address research questions that often have a multidisciplinary character. The content varies greatly, and ranges from historical studies in architecture and landscape architecture, investigations of contemporary challenges, experiments in technology, and calculations of structures.

Fourthly, the funding of research appears to be indirectly problematic for studies of architecture- and landscape architecture-related issues. There are few major research projects financed by external research councils and run by senior scholars. From this perspective, the search for funding for PhD projects is a constant struggle for senior researchers and PhD candidates alike in the Nordic countries. One dissertation was produced by a PhD student financed by industry (professional practices) in collaboration with the Centre of Industrialised Architecture at The Royal Danish Academy. Even though there are difficulties involved in financing doctoral positions, we nevertheless found a total of forty-one PhD projects

in 2024 that were produced as monographs and/or paper-based dissertations in Finland, Norway, Denmark, and Sweden, whereby several of the monographs presented seem to have developed a relative freedom depending on the research subject.

The production of scholarly knowledge oscillates between, on the one hand, the search for solutions to societal challenges through collective working methods, and, on the other hand, projects driven by individual interests and personal curiosity with the support of supervisors. The outcome of PhD programs can thus be viewed both as the creation of new knowledge through dissertations and as the development of knowledgeable individuals who have learnt to structure complex challenges into research projects.

