



Editorial Introduction: Diversity and Architecture

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The history of human and non-human architecture is a testimony of diversity. In the pre-modern world, the adaptation to local climates and circumstances and the variety of cultures and communities produced a diversity of architectural creativity - a world we have partially lost. At the same time, we are today more conscious than ever about the history of our species and about the global variety and diversity of cultures, minorities and architecture.

Since the 1970s, numerous scopes and concepts of diversity have influenced charters and principles fostering the design of built environments, as well as the protection and valuation of indigenous cultures and minorities. Contemporary and post-contemporary thinking emphasizes the concept of diversity, and it is related to various post-colonial, intersectional and authorized heritage discourse paradigms, which are all tightly connected to architecture. In architecture and elsewhere in social design and sciences, diversity is an enigmatic and politically loaded concept, which needs continuous academic and public contemplation and dissection.

This raises questions in architectural research. This issue of Architectural Research in Finland 2021 is approaching the concept of diversity in architecture from various topical perspectives. The articles are based on conference presentation given in the 13th ATUT conference in Aalto University in October 2021.

Martino de Rossi examines the history of courtyard buildings in Helsinki and argues that this typology should be promoted in new construction to enhance the generation of social contacts in urban milieus. The methodological scope is based on the comparison of physical aspects of space such as scale, access and pathways which are mirrored to the behavior of residents in these milieus.

Magnus Rönn analyses three Desing Developer Competitions in Härryda, Sweden. This type of competitions emerged in Sweden in the 1980s and has since then become more and more widespread model for the building of new housing areas. Rönn's article is based on close reading of the competition documents as well as site visits and interviews. The study sheds light on the questions of regulation, competition programmes and their implementation to design principles.

Heidi Turunen develops five approaches to approach architecture through the lens of multidisciplinary materials research. The study is grounded on the complexity of architectural processes, where the approach of materials and design research may generate new practices and new forms of architectural expression. The methodology is based on practical poetics as well as more practice oriented approach to design research and design thinking.

Han Yoon addresses questions of space in computational research of architecture. Current mainstream in computational design tends to focus on the efficiency of architectural procedures and quantitative data of tangible properties, whereas the abstract qualitative properties of space, and spatial dynamics, are underrepresented in the research. The article explores the idea of architectural space as dynamic field structures by re-examining theories since the nineteenth century in multiple disciplines. The study develops a system of computational inquiries to investigate dynamics of architectural space.

Minna Niemi and **Anu Soikkeli** examine three remaining Dvina (Viena) Karelian villages in Finland. These three villages are a testimony of heritage between the east and the west. Their characteristics of the architecture of the villages, reconstructed after the Second World War, reflect the extinction of local Dvina tradition, that disappeared in Finland during these decades. The article highlights the phenomena and concepts of identity, communities and silenced history.

Jhonny Urrea explores the concept of *pohcé* in the architecture of Fernando Martínez Sanabria, one of the leading figures of modern Colombian architectural movement. *Poché* is defined as spatial modelling of the void, that can be open, closed, or neutral. The article concludes that *poche* is a design instrument that has roots in the history of architecture and which is present in the work of Fernando Martínez in the forms of non-structuring *poche*, and later structuring *poche*.

Serenay Elmas, **Günther H. Filz** and **Athanasios A. Markou** study the sustainable use of materials in the Zero Gravity Pavilion. They show how the responsible use of materials in other words, reducing material consumption, being conscious material in the selection, taking advantage of upcycling opportunities, and considering reusing components after the structure's end-of-life can also renew perception of architectural aesthetics.

Xie Fangjie examines three Alvar Aalto's churches as structural design. Fangjie shows that these structures form "surface + frame" composite structural solutions, mostly unrecognized or even misunderstood as a part of Aalto's architectural creativity. The study shows, how the composite system acts as a reasonable stress system and construction basis.

Yizhou Zhao, **Pirjo Sanaksenaho** and **Fernando Nieto Fernandez** focus on projects by Finnish Architects in China. Using the works of three Finnish architects in China, they show how building materials can become carriers of design thinking and be cultural mediators.

Sari Lehtonen and **Marko Kuuskorpi** explore the evolution of Finnish peruskoulu (comprehensive school) through the lens of architecture and the development of physical learning environments. The study is based on a series of case studies from the 1970s to the 2010s. The article shows how the school architecture and the physical learning environments support users and learning and highlight the interdependence of pedagogy and spatial typologies.

Martin Ebensperger and **Günther H. Filz** write about how sustainable solutions for the urban environment can be found in the systems of nature. They use the Stelvio pass to illustrate how forms and structures of settlements and buildings cyclically reshape, reorganize and adapt to natural environments.

Gengmu Ruan, Günther H. Filz and **Gerhard Fink** addresses building structures using only wood. This includes using salvaged timber and wooden nails. The process is analyzed and evaluated to improve the efficiency of material use and optimize the functionality of the final object. The results of the evaluation show that such a step-to-step analysis is highly valuable for finding holistic design solutions.

Jarre Parkatti approaches the concept of urbanity by analysing its traditional character in seminal works such as Jane Jacob's writings. He distinguishes between architectural and social urbanity, and concludes that although to some extent ignored, the first in fact is a precondition for the latter.

Raya Atour examines a scenario of approaching contrasting built environments in architectural-theoretical discussions. The data is based on literature review, participant-produced visual material, and phenomenological reflection are examined with a focus on investigating the role of juxtaposition in proliferating the concept of diversity in the built environment. The paper suggests options and solutions to achieve diversity where abstract concepts can be cast into form in different architectural typologies.

Suzi Pain presents a method of poetic analysis for practice-based researchers in architecture. The article proposes a template for poetic analysis that could be used to examine and communicate creative impulses as a form of artistic knowledge in academic context. The methodology and theoretical background lays in practice-based artistic research and artistic knowledge in the field of architecture.