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Trans-co-design in systemic approach to architectural performance: The multilayered media and agency in creative design and its processes Davidova, Marie

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Trans-Co-Design in Systemic Approach-to Architectural Performance

The Multi-Layered Media and Agency in Creative Design and Its Processes

Marie Davidová

















> Focusing on Landscape, Social and Cultural Ecology in Built Environment for Co-Living Performance

> Shift from Anthropocene in Built Environment > Biodiversity and Climate Change Adaptation


> architectural design and construction

holistic approach

real life laboratory

-CETOBOOSCORD

SETTERINE

Fusion of Several Process-Based Fields:

'Systems Oriented Design'

"Performance Oriented Architecture"

"Prototypical Urban Interventions"

'Time-Based Design'

Service Design²

'Co-Design, Co-Creation and DIY'

MANE



Sevaldson 2013









• 'Performance Oriented Architecture' > Responsiveness



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Eco-Systemic 'Prototypical Urban Interventions'

> Generativness

Performance

Photo: Carrithers 2017











Photo: Horáková 201ý

roach to Architectural Performance

Sand States

Davidová, MArch





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Photo: Novotná 2014.

Traditoinal Architecture from Extreme Climates Observations: • today practice adaptation



GIGA-mapping Svalgangs and Skuts

Systemic Approach to Architectural Performance Project with the Kind Support by EEA Grants GIGA-Map by Marie Davidová

The study was performed by Marie Davidová and Dana Raková who are also the authors of the images. The data were col-lected from Norsk Folkemuseet in Oslo - The Open Air Museum, Slotsfjellsmuseet in Tønsberg, Landa Muzeum, Viga, Litunet, Kolbensveit and Hordaland Museum in Bergen.

We would like to thank to Birger Sevaldson from the Oslo School of Architecture and to Jørgen Solstad from Vestfold Cultural Heritage Buildings Preservation for giving for providing us with information and to Stian Myhren and Terje Planke from Oslo Open Air Museum, Sondre Skur Roberg, Kristina Litherland and Hakon Livland from Slolotsfjells museet in Tønsberg, Nils Viga Hausken from Viga, Stina Ekelund Erlandsen from Nesesjøhuset and Espen Kutschera from Hordaland Museum in Bergen for providing us with plans and/or accessing us the spaces.

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Relating Environmental and Social Conditions of Norwegian Traditional Architectures' Non-discrete Spaces, so called "Svalgangs" and "Skuts"

The unclimatised spaces between interior and exterior, generating the onion principal of the building, securing to different extends visual, sound, light and climatic penetration, have its place in almost all traditional architectures, performing as its energy exchange with the surrounding environ-

ment. "Svalgas and Skuts", the semi-interior spaces in Norwegian traditional architecture, are giving various opportuni-ties of use and performance. They are serving as public-private and indoor-outdoor interface, developed in high poten-tials of articulation with different or even gradual degrees of permeability in relation to socio-environmental conditions. The GIGA-map is relating such spaces in context of their original climatic location, opportunities of user or inhabitation, options of penetration of overall environment and spatial dimensions, its distribution enveloping the interior spaces, world axis orientation in today location and climatic Exchange of the onion principle. The GIGA-map is reasoning into various scales and layers, relating data and their development through colour coding gradients, their intensity through dashed lines and weights, themes through curvature degrees and arrows suggesting the process of the performance. ment.

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Ground and Semi-Ground Inhabittation:

Cappadacia Case Study Thematic GIGA-Map

author: Marie Davidova project: Traditional Architecture and

funded by Student Grant Competition at the Technical University of Uberec, Tech Republic The themat GIGA-Map is relating macro and micro climatic relations of enterior and semi-interior spaces with geological position and world as its interation, substantian and addive building within and with that store. The duried lines operas internaty patients. The graphics arrows express increases and decreases, while the test arrows suggest the reading directions. The map clearly expresses, that wine decined visits of enterior space strain of the routing directions: climato use of approximately 10C through the ground material and natural ventilation; and different climates and world axis of entations were designed for different puppies of use. This shall relate to babatice with different climate climate use the graphic of different puppies of use. This shall relates to babatices with different climate climate use the graphic of different puppies of use. This shall relates to babatices with different climate climates were designed for different puppies of use. This shall relates to babatices with different climate shall be designed for different puppies of use. This shall relates to babatices with different climate shall be designed for different puppies of use. This shall relates to babatices with different climates shall be designed for different puppies of use. This shall be designed for the shall be designed for different puppies of use. This shall be designed for the shall be desi

Turkey map of Köppen climate classification



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Responsive Transformer: o application

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Spiralling Slope:noitspilesieses





ma Ridia da Barris

Birke 2018

'Service Design' > non-anthropocentric eco-systemic services

to: Carrithers 2017

Robert Carrithers ©



Photo: Škuta 2014















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Circles 1



'Co-Design, Co-Creation and DIY'




















Design's Boundary Conditions in Relation to Environmental **Interactions GIGA-map**

Systemic Approach to Architectural Performance and Wood as a Primary Medium to Architectural Performance project Marie Davidová

This GIGA-map developed as a ZIP-analysis of GIGA-map-Inis GloA-map developed as a 2/4-anaysis of GloA-map-ping Workshop lead by Birger Sevaldson that was mapping pavilions from the project Wood as a Primary Medium to Architectural Performance. It is mapping a problem of dif-ferent types of environmental, biological as well as physical, interactions through a range of boundary conditions of dif-ferent designs. The case designs were either authored or co-authored by the GIAGA-map's author and were selected due to their suitability to the not fully strict 'gradient'.

The map lays out a matrix of parameters and relating their interactions that often generate more or less complex feed-back loops, some of them cycling even in hierarchical constellations. The stroke thickness doesn't fully reflect the hierarchy in the system but the importance of related interactions. The gradient of the splines represents the boundary crossings, while the colour gradient of lines and texts for each project represent a range from design's openness to closeness of the boundary.

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material - environment responsive Marie Davidová, MArch, Ph.D.: Sys	temic Approach to Archiv	ctural Performance	
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> screen parasite















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Biodiversity and climate Change Adaptation

















Research by Design through:

> Eco-Systemic Prototypical Urban Interventions

> Related Historical Prototypes Studies

Leading to the Shift from Anthropocene in Built Environment >

- cross-species co-living > dwelling and edible landscape
 - co-design process > the process of its performance
- public and transdisciplinary communication and co-design
 - analogue and digital co-design for adaptation
 - Creative Commons Attribution-NonCommercial 4.0

Shift from 'Cities for People' (Gehl, 2010)

> Participation of Both, Biotic and Abiotic Agency

> One Co-Performative Ecosystem, the 'Real Life Laboratory'

Twofold 'Ecological Urbanism' (Mostafavi & Doherty, 2016):

physically prototyping and testing our work through overall

ecosystemic engagement

tool to communities to spread the work through DIY

These multi-layered and multi-scaled local specific eco-systemic trans-co-design real time processes are therefore building the ground of the very open newly emerging design field of

Systemic Approach to Architectural Performance

Thank you!

Marie Davidová, MArch, Ph.D.

Founding Member and Chair of Collaborative Collective md@collcoll.cc

Lecturer at the Welsh School of Architecture Founding Member of Systemic Design Association

Read my publications at:

