

10th Architectural Research
Symposium in Finland

ATUT 2018

TIME SCHEDULE

*Global North – Global Challenges
and Local Responses
in Contemporary Architecture*

Address: Otakaari 1X, Espoo.
(nearest Metro station: Aalto University)

Friday October 26th

8.00	Hanging up the posters & registration. Coffee available.	SECOND FLOOR AULA
9.00– 9.15	Conference Opening Words by Pekka Heikkinen & Information by Helena Teräväinen	LECTURE HALL A215
9.15– 10.15	KEYNOTE <i>Pirjo Sanaksenaho: MODERN HOME in 1950s and 1960s. Magazines as Research Material.</i>	LECTURE HALL A215
10.15– 11.45	SESSION A1: ARCHITECT & GLOBAL AGE. <i>Chair: Kimmo Lapintie</i> <ul style="list-style-type: none">- Gigliotti, Angela: "Joy and Pain of Architectural Modes of Production: How Danish Practices Work (Or Are Forced to Work) Under EU"- Karppi, Ilari & Sankala, Iina: "Transit for a Better and More Equitable Urbanity"- Lapintie, Kimmo: "Towards Post-Human Urbanism"- Ozorhon, İlker Fatih & Ozorhon, Guliz: "Housing From Global to (Neo) Local Concepts/Relationships/Tendencies"- Sandman Helena & Levänen, Jarkko: "Architectural Design for Maternal Health. Empathic Design Enabling Sustainable Replicability"	LECTURE HALL A215
11.45– 13.45	LUNCH (not included) + POSTER TIME 1a: <i>Becker, Edvard & Kajaste, Helmi</i>	SECOND FLOOR AULA
13.15– 14.15	SESSION A2: METHODS&HISTORY. <i>Chair: Kristo Vesikansa</i> <ul style="list-style-type: none">- Porzilli, Sara: Digital Documentation in Architecture. Methods of Analysis for the Preservation and Development of Our Nordic Built Heritage.- Pyykkö, Saara: Kaupunkikuvasta asemakaavaan ja korttelikortteihin – Värityöpaja uuden asuinalueen kaupunkisuunnittelun välineenä (Finnish/English)- Sayed, Neha & Diaz-Kommonen, Lily: Place as Flux: A Visual Narrative as a Tool for Research.	LECTURE HALL A215
	SESSION B2: SUSTAINABILITY &TIMBER. <i>Chair: Heidi Turunen</i> <ul style="list-style-type: none">- Becker, Edward: Completing the Cycle: An Alignment of Open Source Digital Technologies and the Distributed Manufacturing of Advanced Biomaterials- Karjalainen, Markku: A Study of the Frame Designs of Finnish Timber Residential Apartment Buildings and Forms of Ownership of Apartments- Toiviainen, Pasi: Emergent Urban Natures as a Turning Point for Design: a Historical Perspective	LECTURE HALL A123

14.15–
14.45

Coffee Break + **POSTER TIME 1b:** *Kalakoski, Iida & Lima, Fabio*

SECOND FLOOR AULA

14.45–
15.45

SESSION A3: ARCHITECTURE.

Chair: Pirjo Sanaksenaho

- Heikinheimo, Marianna: Prototyping New Use
- Kholina, Anna: What Makes Urban Nature Meaningful: Insights into the Role of Natural Environment in the Finnish Suburban Context
- Teräväinen, Helena: The Notion of Beauty in Architectural Discussions – Whom Do We Allow the Judgment of the Building Not to Be Beautiful?

LECTURE HALL A215

SESSION B3: HOUSING.

Chairs: Johanna Lilius & Anne Tervo

- Maununaho, Katja: Integroidun asumisen sosiaalisen seurallisuuden tilat (Finnish/English)
- Pirinen, Antti, Tervo, Anne & Meriläinen, Sanna: To Share, Or Not to Share: a Design Game for Developing the Shared Spaces in Housing
- Sandman, Helena: Shouldn't All Architecture Be Designed with Empathy? A Case of Design Probes for Affordable Housing Design in Zanzibar

LECTURE HALL A123

16.00–
17.30

KEYNOTE

Ola Kjellander: Life and complexity

LECTURE HALL A215

17.45–
18.00

Short Excursion into the new ARTS Building Väre – before we take metro into Helsinki and Dinner!

19.00–
21.00

Conference Dinner: Kiila restaurant, *Kalevankatu 1, Helsinki*

Saturday October 27th

9.30–
10.30

SESSION A4: GREEN & REGIONAL.

Chair: Pia Fricker

LECTURE HALL A215

- Abramovich, Xenia & Tahvonen, Outi: The Green Infrastructure in Peri-Urban Landscapes.
- Existing Studies and New Insights
- Bourgeau, Felix & Galan, Juanjo: Vernacular Landscapes, Toward a Conceptual and Contextual Definition
- Hautamäki, Ranja: Construction of Urban Green in the Compact City Discourse of Helsinki City Plan

SESSION B4: LEARNING & PEDAGOGY.

Chair: Anni Vartola

LECTURE HALL A123

- Chudoba, Minna: Urban Planning in Architecture Education – Eliel Saarinen's Pedagogical Text Revisited
- Teräväinen, Helena & Lima, Fabio: How to Read Urban Space: Research and Learning in Juiz de Fora, Brazil
- Vesisenaho, Mikko & Lievonen, Mirja: Heading at Enabling Settings for Learning

10.30–
11.00

Coffee break + **POSTER TIME 2:** *Sankala, Iina, Karppi, Ilari, Vakkuri, Jarmo & Tahvonen, Outi*

SECOND FLOOR AULA

11.00–
12.00

SESSION B5: MULTICULTURALITY & IDENTITIES. *Chair: Laura Arpiainen*

LECTURE HALL A123

- Hewidy, Hossam & Lilius, Johanna: The Bazaar: "Retail Inventions" in the City – Spaces by Immigrants
- Hollmen, Saija, Reuter, Jenni & Sandman, Helena: Architecture of a Place - Cross-Cultural Perspectives to Architectural Design
- Shu-Yeng Chung, Simone & Ng, Mary Ann: Life in the Fourth.

12.10–
12.15

INFO: Tampere School of Architecture: ATUT 2019!

LECTURE HALL A215

12.15–
13.15

KEYNOTE

Marija Drémaitė: Symbolic Geographies. Nordic Inspirations. Baltic Identities.

LECTURE HALL A215

Closing words and invitation to Dipoli. *Chair of the organizing committee Pirjo Sanaksenaho.*

13.15–
15.00

LUNCH (included in the fee) in Dipoli, Otaniemi & Dipoli Excursion guided by Ellen Heikkilä

KEYNOTE

PIRJO SANAKSENAHO

MODERN HOME in 1950s and 1960s. Magazines as research material.

Friday 9:15
Lecture hall A215

Pirjo Sanaksenaho (born 1966) received Master degree of Architecture at HUT in 1993 and Doctoral degree in 2017 at Aalto University. She is Associate Professor of Building Design at Aalto University, School of Arts, Design and Architecture (2014-). Her fields of teaching are public buildings and health- and wellbeing architecture.

She is the head of SOTERA research institute for healthcare facilities and academic leader of Living+ platform of Aalto University for multi-disciplinary research of human-centered living environments.

She has also an own office Sanaksenaho Architects with architect Matti Sanaksenaho. She has been involved in over twenty realized buildings, e.g. the Student Center in Vaasa, St Henrys Ecumenical Chapel in Turku, the Students' Healthcare Building in Helsinki and Villa Cipea in Nanjing.

She has participated in many national and international exhibitions among others Venice Biennale of Architecture. She has had several positions of trust in the field of Architecture.





KEYNOTE

OLA KJELLANDER

Life and complexity

Friday 16:15
Lecture hall A215

Ola Kjellander is a founding partner in Kjellander Sjöberg Arkitektkontor which has won many prizes and awards for their works.

He has over 20 years experience on sustainable design together with clients, possessors of real estate, planners, architects and users.

Med över 20 års erfarenhet i yrket utvecklar och leder Ola Kjellander kontinuerligt nya projekt som kombinerar hållbar design med exakt utförande tillsammans med kunder, fastighetsägare, planerare, arkitekter och brukare. Han agerar även som kreativ och drivande part i planering och ledning av workshops för kommuner i stadsbyggnad.

Ola Kjellander står bakom flera av kontorets prisbelönta projekt. Några av hans mer betydande bidrag inkluderar: Stadsutvecklingsområdet Hästholmssundet utveckling av flera bostadskvarter på Nya Årstafältet, stadsplaneringsprojektet Nya Eriksberg i Uppsala samt Bostadshuden Monoliten, Fredriksdal, Stora Katrineberg och Etaget i Stockholm. I Malmö arbetar Ola Kjellander med ett flertal projekt såsom Citadellskajen och Sege Park.



KEYNOTE

MARIJA DRĖMAITĖ

*Symbolic Geographies. Nordic Inspirations.
Baltic Identities.*

Saturday 12:00
Lecture hall A215

"In Finland we really felt architecture", Lithuanian architect Vytautas Čekanauskas used to say remembering his study trips to Finland in the 1960s. Indeed, the Nordic concept of regionalism became very important in the formation of the Baltic post-war modernism (1959–1969), because it was seen as an acceptable model for Lithuanian architects who wished to belong to the international community of modern architecture, yet retaining a national idiom and being distinctive within the USSR. In this context, the architecture of the Soviet Baltic republics (Estonia, Latvia and Lithuania) has been seen as exceptional, appropriating western cultural models much quicker and with greater passion, and was thus labelled as 'our little West' or 'an inner abroad'. Finnish modern architecture played a special role in this process as it was experienced at first hand during the study trips.

Marija Drėmaitė is an associate professor in the Department of Theory of History and Cultural History at Vilnius University and curator of exhibitions. She holds a PhD in History of Architecture (2006). Her research is focused on twentieth-century architecture, modernism, and industrial heritage. Her publications include *Baltic Modernism: Architecture and Housing in Soviet Lithuania* (Dom publishers, 2017) and the edited *Architecture of Optimism: The Kaunas Phenomenon, 1918–1940* (Lapas, 2018) which accompanies an eponymous exhibition.



Aalto University
School of Arts, Design
and Architecture

**Extended Abstracts for
Session A1**

ARCHITECT & GLOBAL AGE

Room A215
Chair: Kimmo Lapintie

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Gigliotti, Angela

ORAL&PAPER Presentation



Angela Gigliotti, is an architect and researcher. Her field of research is "Architecture and labour" where she contributes studying the Danish case. Her doctoral research "The Labourification of Work: The contemporary modes of architectural production under the Danish Welfare State" has investigated the evolution of the architectural profession in Denmark in relation to its economic system. She held the position of PhD Fellow at the Aarhus School of Architecture (2016-2019) and External Lecturer within the Architecture and Design Department in DIS Copenhagen, Denmark (2016-). Recently, she has been invited to join as Visiting PhD Candidate the Architectural Association, School of Architecture, London, UK under the tutelage of Pier Vittorio Aureli in the City/Architecture PhD Programme (Spring 2018). Previously she taught at the NMBU University in Ås (2014-15), Norway and Polytechnic University of Milan, Italy (2010-12). Her works have been awarded, exhibited and published in international context; among the others: FORSK, Godsbanen, Aarhus (2018); BIG DATA, Aarhus School of Architecture (2017); National Museum Architecture in Oslo (2017); Capitalism is over, Milano Design Week (2017); Pavilion de l'Arsenal in Paris (2017); Gallery Art-Cade in Marseille (2016); OAFs Fellowship (2015-2016) by the Oslo Association of Architects; Gallery 0047 in Oslo (2014); in "SQM: the quantified home" - Lars Müller Publishers (2014); Monditalia at La Biennale di Venezia (2014); BIO23 in Ljubljana (2012); Award Gillo Dorfles in Trieste (2012).aBeyond academia, she co-founded U67, a research-based architectural practice, listed in the "Architects' Directory 2017" as the Danish standard-bearer for emerging architectural practice by Wallpaper* magazine.

Joy and Pain of Architectural Modes of Production: How Danish Practices Work (or are forced to work) under EU

Angela Gigliotti

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Summary

This paper frames the power-structure related to the European Union and its effects on architectural labour in the Danish Welfare State (1993-2016). It claims about an intentional top-bottom shaping of professionalism that, albeit not being warmly embraced by the practisers, has been able to booster free circulation generating positive profit figures. This argument is sustained by in-depth interviews; tender directive; wages regulations; and national counter-reaction to supra-national legislation. This paper aims to contribute to how specific power dynamics have been able to shape professionalism and which mechanisms have been deployed by the practices to overcome such bonds.

Keywords: labour, work, architectural production, history of practices, Europe, Denmark

Extended Abstract

This paper is part of the author's ongoing PhD dissertation titled "*The Labourification of Work: The contemporary modes of architectural production under the Danish Welfare State*". The field of research is "Architecture and Labour" (Deamer, 2015; Aureli, 2015). Architecture is a liberal profession bound to the economic system; not to be considered a hobby, it has to be able to generate a turnover to sustain the life of the army of workers and labourers involved in it, but to do that it also needs a substantial amount of money to reify its outcomes, the works. The nature of the architectural condition is a point of departure that the author's research addresses, and probably the reason of many dissatisfied architects. But if these are shared conditions of being an architect in a globalized economy, the friction between labour and work (Arendt, 1958) also relates to a national economic system. A case that has rarely been discussed in this discourse, it's the Scandinavian one and in particular the Danish Welfare State where an investigation of the architectural profession in relation to the economic system has not been a priority of scholars yet, concerned instead on the works, bridging from French *les oeuvres*, the outcomes of the Welfare State intended as

political project. The research aims to occupy this niche: to investigate the relationship between the Danish Welfare State and the contemporary modes of architectural production. The thesis addresses two time-spans. The first one, after the WWII (1945-75) covers the *Trente Glorieuses* and the production of the architects blossomed under the *Great Optimization*, sustained by the investments arriving from the US under the Cold War. The second one concerns the Neo-Liberal turn (1993-2016) focusing on: the national policies aimed to flex-secure the labour market; the supranational agreements of the European Union related to the tenders and the free circulation of service; and, the national counter-legislation to support architectural procurement. In both time-spans, the call to efficiency, standardization and the consequent division of labour will be addressed.

Regarding the methods, the research has used a mixed approach: for the first time span quantitative method (literature review, archive work); while for the second one qualitative one (grounded theory). In particular, regarding the choice of the qualitative one is consistent in regards to the methods favoured by scholars in contemporary research endeavours, that are mainly qualitative: case studies, grounded theory, and ethnography (Cuff, 1991; Yaneva, 2009). The research's expected outcome aims to unveil which are the *mechanisms* that the architectural practices (*tegnestuer*) have deployed to face economic junctures and overcome consequent bonds, through a definition of how global and local *influencers* have *shaped* the Danish architectural modes of production.

Therefore, the Western Block under the Cold War and, more recently, the European Union are investigated as supra-national networks of power, whose relationship with architecture has been of high interest in the field. In particular, an extensive trend of dissemination has been published about the role of "*knowledge-exporters*" (Franch E., Kubo M., Miljački A., Schafer A, 2015) while the repercussions on the *importers* have rarely been discussed. This paper acts in this niche presenting Denmark as an undiscussed case concerning labour, modes of architectural production and Welfare State. It focuses on the power-structure related to Europe and its effects on architectural labour (1993-2016). Specifically, here I present the data collected through grounded theory method during the research, when in-depth interviews with practices and union representatives have generated knowledge on the topic. Together with the results of the qualitative analysis, some paradigmatic documents are: the tender directive 2014/24/EU and its precedents that shaped EU free circulation of services; the *Vejledning Arkitekthonorarer Byggeri og Planlægning* (1998;2003) so the documents that mandates the definition of wages; the *Udbudsloven* 2016 as a national counter-reaction to supra-national legislation. Through interpretative research, I argue that the circulation of knowledge under particular conditions has intentionally shaped the Danish architectural profession. While these top-down procedures of standardization are considered diffidently, the figures showing the result of Danish architectural export, possible thanks to EU legislation of free circulation, are showing a scenario in which half of the Danish architectural production, and therefore turnover, is outside the national borders.

In conclusion, this paper aims to contribute on how specific power dynamics have been able to shape the architectural profession and its organization, in Danish *Tegnestuens Organisation*, and which mechanisms have been deployed by the practices to overcome forced labour conditions making a profit out of boundaries.

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Karppi, Ilari & Sankala Iina

ORAL Presentation



Ilari Karppi is adjunct professor of Regional Studies at University of Tampere Faculty of Management. His research interests pertain to smart urbanism and the integration of its various elements as well as planning and governance of sustainable urban development as management and leadership issues in municipalities and city regions. In the current BEMINE project, he focuses on the socio-material basis of urban development, with special reference to tools and procedures that affect planning practices.



Iina Sankala earned her Master of Administrative Sciences degree majoring in Environmental Policy and Regional Studies. She works as a researcher at the University of Tampere Faculty of Management. In the BEMINE project she focuses on strategic land-use of cities and city regions as well as sustainable urban development. Her other work and study-related fields of interests include urbanization as well as governance of sustainable mobility and growth.

Transit for a better and more equitable urbanity

Ilari Karppi, ilari.karppi@uta.fi & Iina Sankala, iina.sankala@uta.fi

Summary

Nordic welfare state sought to provide its citizens with sustainable, affordable and healthy urban environments. The model that linked planners, mortgage banks and construction industry as a systemic entity is now under pressure. Strong migration to 4-6 city regions transforms Finland's spatial setup. The process entails major challenges: expanding urban structures are massive sources of greenhouse gases but easily dysfunctional also in terms of social fairness, public health or even individually perceived quality of life. Transit-oriented development, often implemented in growing city regions, holds a promise for more equitable urbanity if the decision-making systems learn how to best utilize it.

Keywords: Equitable urban development, urban design, transit-oriented development (TOD), light rail transit (LRT)

Nordic welfare states once sought to provide their citizens with sustainable, affordable and healthy housing conditions by planning compact residential areas detached from the functions that were deemed as harmful for healthy living conditions. This was not a mere Nordic – and even less so Finnish – whim of social engineering. The Mandarins of modern architecture, under the umbrella of CIAM, or the International Congress of Modern Architecture, had programmed the preferred urban design for the decades to come in its Athens Charter already in 1933, at the early dawn of the welfare state (cf. Graham, 2017). That their ideas got such leverage throughout the industrial world and in single planning cases in developing economies is a magnificent show of strength of international soft regulation within planning and design.

Soft regulation, or any ideas, need hard measures to yield real of tangible results – “tangible” understood here as “material”. In the Finnish case, these hard measures were not only (1) instrumental laws that helped and still help turn CIAM's ideas into preferred planning practices: planning by them was *getting it right*. Then there are (2) municipalities where zoning, planning and construction take place. In institutional settings such as those of the Nordic Countries with municipalities having constitutionally secured financial, taxation-based capacities of own policymaking and goal-attainment, their role cannot be overemphasized. Finally, (3)

mortgage banks and (4) the entire construction industry were involved in the machinery of planning healthy, inclusive and generally equitable society irrespective of its members' differing strengths and limitations in pursuing goals that are thought to make life good. It was not able to turn out urbanity that would have been equally good for every single individual as the member of the society, but we can start from an assumption that it attempted to create equitable urbanity that – the modernists assured – *was* good.

For several reasons this model is now in a major rupture. “Big” welfare states have been largely scaled down as the Nordic Countries have joined the international tax competition. This has remarkably weakened the public housing agencies that used to be one of the model's touchstones (Robbins, Cordua & Ascher, 2012). Simultaneously the conditions and hence requirements set for planning living environments, now considered as good, have dramatically changed. To look once again at Finland, strong international and particularly domestic migration to merely 4 to 6 urban regions inevitably transforms the country's spatial setup. Much of the nation effectively relocates itself to new places. A crucial question in many respect is whether or not, and through which dynamics, they will be new urban or new *suburban* dwellers.

The question is made even more acute as constructing new housing, workplaces, services and infrastructure to enable this relocation has taken place at a great speed and appears to continue so in a foreseeable future. Cities that want to cope with this transformation in a sustainable manner must be prepared to open, rezone, recycle or retrofit new districts within the existing urban fabric to new migrants. This requires investments and capability of both financing them and using them as a driver towards sustainable and equitable urbanity.

Urban planning will be strained. Expanding urban structures constitute a massive source of greenhouse gases. Moreover, they are in international assessments often deemed dysfunctional for reaching goals such as social sustainability, better public health or even individually perceived quality of life. As it is frequently pointed out especially in the American post-2008 discussion on the interconnections between urbanism and sustainability, failures in keeping urban structures dense through good planning easily leads to results that are inferior to humans and nature alike. Finland and Europe in general have not seen sprawl in its North American scale. “Drive-‘til-you-qualify” logic-based subdivisions, made of single-family housing, juttied in outer fringes of their respective central cities combine long commuting distances with higher financial burden with the prospect of rising fuel costs and bigger per capita investments on roads, water pipes, sewers, energy grid and communications infrastructure.

Identifying the directions for future growth, defining the spatial scale for providing most of the new housing, and giving a clearly communicable or even charismatic material form to the “model” thus created can be motivated with returns on investment it may yield to humans and nature alike. Of the instruments of this formgiving, transit-oriented development (TOD) is one of the internationally most widely applied (cf. Calthorpe, 1993). It may suit particularly well on the metropolitan or city-regional scale with broad spatial coverage and a need to bring together different modes and speeds of mobility in a continuum of different urban spaces, or a “transect” (Duany, 2013). Since the mid-1980s the TOD processes of choice in many mid-sized to large cities have been light rail transit (LRT) systems that require heavy investments, but hold a major promise for a combination of wealthier yet simultaneously better and more equitable urbanity. However, this requires the entire dynamics of urban development and how transit and better accessibility are related to it being not only re-thought but also extended beyond the boundaries separating suburbia from the central cities.

This paper uses case-study data from Tampere city region and its on-going LRT construction process as an example of the current TOD thinking with data from thematic interviews, focus groups and workshops from 2015 on. It also refers to comparable or otherwise interesting international LRT planning and construction

processes as discussed in planning journals or based on the authors' own fieldwork, observations and involvement. Of the latter, the Brooklyn-Queens Connector (BQX) in New York City is of particular interest. Its relevance as a reference case is highlighted by Mayor of New York City Bill de Blasio in a report launching the project (BQX Report, 2018). He speaks of its promise as of helping NYC to become North America's fairest big city, giving with these words credit to equity as a vital TOD aspect.

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Lapintie, Kimmo

ORAL Presentation



Kimmo Lapintie is Professor of Urban and Regional Planning at the Department of Architecture, Aalto University School of Arts, Design and Architecture. He holds a Master's degree in architecture and PhD from Tampere University of Technology, and a Licentiate Degree from the University of Turku. He has done research on argumentation and participation in planning, theory of space, green concepts and ecosystem services, and the emerging phenomenon of multi-locality of living and working. Recent studies have been published by *Routledge*, *International Planning Studies*, *European Planning Studies*, and *Library and Information Science Research*.

Towards Post-Human Urbanismⁱ

Kimmo Lapintie

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Abstract

Post-Human Urbanism in this paper refers to the theoretical questioning of the human being as the basic ethos of urban planning and design. However, the concept is actually not as radical as it might seem: although it does question some of the taken-for-granted assumption of classical humanism, particularly the universality and a-historicity of human nature and human body, and the legitimacy of needs justified by this universalism, it is not a doctrine against human beings. Against the ideology of "cities for people", post-human critique highlights the fluidity, the diversity and the contested nature of human identities.

Keywords: post-humanism, Foucault, archaeology of knowledge, urbanism, planning

Extended abstract

"Post-human" is, of course, a provocative concept in the context of architecture and urbanism, which have essentially based their ethos on designing and planning a "human-centred" environment. What makes this theoretical perspective relevant in today's urbanism is the fact that the universalist human being is rapidly dissolving. The growth of multiculturalism is an unavoidable phenomenon in European cities as the result of immigration and increasing mobility of work. However, its perception in urban planning is by no means self-evident. Contemporary planning discourse is rather characterized by an almost systematic avoidance in this respect. It is this silence that will be studied in this paper, by using the method of archaeology of knowledge introduced by Foucault in his books *Words and Things* and *Archaeology of Knowledge*.

An attempt is made to explain this observation with reference to the strong functionalistic tradition in the Nordic planning agenda and the tacitly adopted biopolitical definition of legitimate needs of the urban citizens. The Utopian ideology of a class-less planning for the 'human being', with its biopolitical undertones of biologically determined features of the population, will necessarily clash with new demands for culturally oriented, specialized services and spatial practices that multiculturalism necessarily entails. This is confronted with the seemingly 'transparent' and generalizable planning ethos that has remained unquestioned, hidden by the emphasis of physical planning along with social and cultural 'soft' policies.

Foucault's archaeology of knowledge is a methodology developed in his books *Madness and Civilization* (1973, orig. 1961), *The Birth of The Clinic* (1973, orig. 1963), *The Order of Things* (1985, orig. 1966), and *The Archaeology of Knowledge* (1985, orig. 1969). It is based on an analysis of historical discursive formations, where statements are taken as events, and the relationships of these statements is studied inside the discourses. This does not mean that they would be unrelated to non-discursive elements, but the way they are formed is not based on a reference to transcendental objects (AK p. 49) or the experience or meaning-giving of the subject (AK p. 54). Thus, Foucault is using double-bracketing: without denying the existence (or even the relevance) of non-discursive events, he is searching for the rules that determine the formation of statements within the group of serious speakers. Unlike language (*langue*) that allows an infinite set of possible sentences, the discursive formations are characterized by rarity (AK p. 118): not anybody has the authority to speak seriously (about medicine, about economics, about science, etc.), and there is a rarity of what they can say.

In their famous critique of the archaeology of knowledge, however, Hubert Dreyfus and Paul Rabinow argued that this double-bracketing is a problem for Foucault, since there will not be any consistent way of grounding the rules of formation that are so essential to archaeology (Dreyfus & Rabinow 1983). This critique has been taken for granted by many scholars, which is a pity, according to Tuomo Tiisala (2015), since it has prevented research in the humanities and social sciences to develop archaeology as a fruitful methodology. Tiisala argues that Dreyfus and Rabinow have not understood the pragmatic turn in Foucault's thinking, which makes it possible to assume strict rules of discourse formation that are not accessible to the speaker's consciousness, nor are based on the validity of these statements, but which they learn through practice. He refers to the unpublished manuscript of the *Archaeology of Knowledge*, where Foucault still defined the rules of discourse formation as statements, which would indeed have undermined his idea of unconscious rules that are followed (but not known) by the speakers (Tiisala 2015, p. 659). In the published version of the *Archaeology of Knowledge*, however, Foucault clearly states that the rules are not statements but parts of the discursive practices:

Archaeology of knowledge is also suitable for analysing planning discourse, even though the early Foucault did not discuss it while he was interested in the archaeology of the human sciences. But how can one analyse – by using the archaeological method – that which is not said? In *Madness and Civilization*, Foucault clearly had this ambition, but in the *Archaeology of Knowledge*, however, he seems to be saying almost the exact opposite: "Our task is not to give voice to the silence that surrounds them, nor to discover all that, in them and beside them, had remained silent or had been reduced to silence." (AK p. 119).

But how can you define the limits of discursive formation without going to the 'other side' and describe it? Does this in the end mean giving a voice to the silence? This difficulty reminds us of the famous observation by Wittgenstein that seeing the limits of your world and language (which are the same limits) is not possible, since you would in a way need to 'measure' them from the outside (Wittgenstein 1961, 5.61). But the limits that Foucault means are less all-encompassing; they are the limits of the group of experts that have the authority (at a certain historical time and place) to speak seriously about madness, the economy, science, planning, etc.

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ⁱ This study is part of a multidisciplinary project BEMINE: Beyond MALPE Coordination, Integrative Envisioning, carried out at the Department of Architecture, Aalto University School of Arts, Design and Architecture.

Özorhon, İlker Fatih & Özorhon, Güliz

ORAL&PAPER Presentation



Dr İlker Fatih Özorhon graduated from Yıldız Technical University, Faculty of Architecture in 2000. He got the master degree from Istanbul Technical University by his thesis on “Natural Light with Its Aspect Determining the Identity of Architectural Space” at Architectural Design Program in 2002. He completed his PhD studies at Istanbul Technical University, Architectural Design Program by his thesis named “The Issue of Originality in Architecture: Turkish Modernity in the period of 1950–1960” in 2008. He has studies published in several journals, presented in symposiums and congress and has awards in architectural design competitions. He is working as an Associate Professor at the Faculty of Architecture and Design in Ozyegin University. His recent research areas include Architectural Design, Design Teaching, Modernity and Modern Architecture, Modern Turkish Architecture.



Dr Güliz Özorhon, graduated from Yıldız Technical University, Faculty of Architecture in 2000. She obtained the master degree from Mimar Sinan University of Fine Arts. She completed her PhD studies at Yıldız Technical University, Architectural Design Program by her thesis named “Housing Architecture of Istanbul in the Period of 1950–1960” between 2003–2009. She has studies published in several journals, presented in symposiums and congress and has awards in architectural design competitions. She is working as an Associate Professor at the Faculty of Architecture and Design in Ozyegin University. Her recent research areas include Architectural Design, Spatial Organization, Sustainability, Ecological Design, Housing-Housing Settlements, Architectural Education.

Housing from Global to (Neo) Local concepts/relationships/tendencies

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Summary

“Globalization” that influences every country-city-person in different percentages / forms makes the whole world a great interaction ball. How “housing” is affected by this situation? On the one hand, housing in a world, that is increasingly turning into one by becoming globalized, on the other hand, local housing, which take shape according to characteristics and spirit of location. Can they be dissociated from each other? Or, local architecture take shape again by global flows? In this study, the effects of globalization on local architecture, in the context of housing, was investigated through the case of Turkey. For this investigation; three components, including research environment, practice and architectural project competitions were benefited from, and some determinations and evaluations were made over this platform through samples.

Keywords: housing, globalization, local, city

1. Introduction**1.1 Theoretical Framework**

In the literature, globalization is discussed together with the local, these two concepts are often discussed as if they state opposite discourses. Those people who argue for localised against globalisation use identity platform, those people who argue for globalisation against local use economy-technology-innovation

platform. In the current period; the forms of communication, information and transportation are changing; information, capital and human flow rates are increasing. While the key words of the current period are liquidity and mobility; the new industries of that are information, communication, service, advertising and image sectors. At this point, the main actor determining the dynamics of urban housing is large-scale global capital (Yada Akpınar and Aysev, 2011). The system creates a large network established on money. Under these circumstances, housings are surrounded on one hand by high residences ignoring the characteristics of place/ local, and gated communities with no relationship with place/local, on the other hand by imitation architectures that position local as a continuity of formal representation. To what extent current housing environment is affected by these discussions?, or to what extent designers are aware of this process?. In this context, this study aims to reveal the current situation of urban / housing zones with a holistic comprehension, by investigating it through different routes.

1.2 Research Method

The research proposes a platform consisting of three components (Fig.1) that will provide for the reactions of the different components of the architectural environment to be traced holistically. The concepts, added in /excluded from the housing issue on this platform, along with globalisation, will be investigated through the case of Turkey; the interactions of these concepts will be revealed, and it will be observed how this transformation affect the current architectural practice

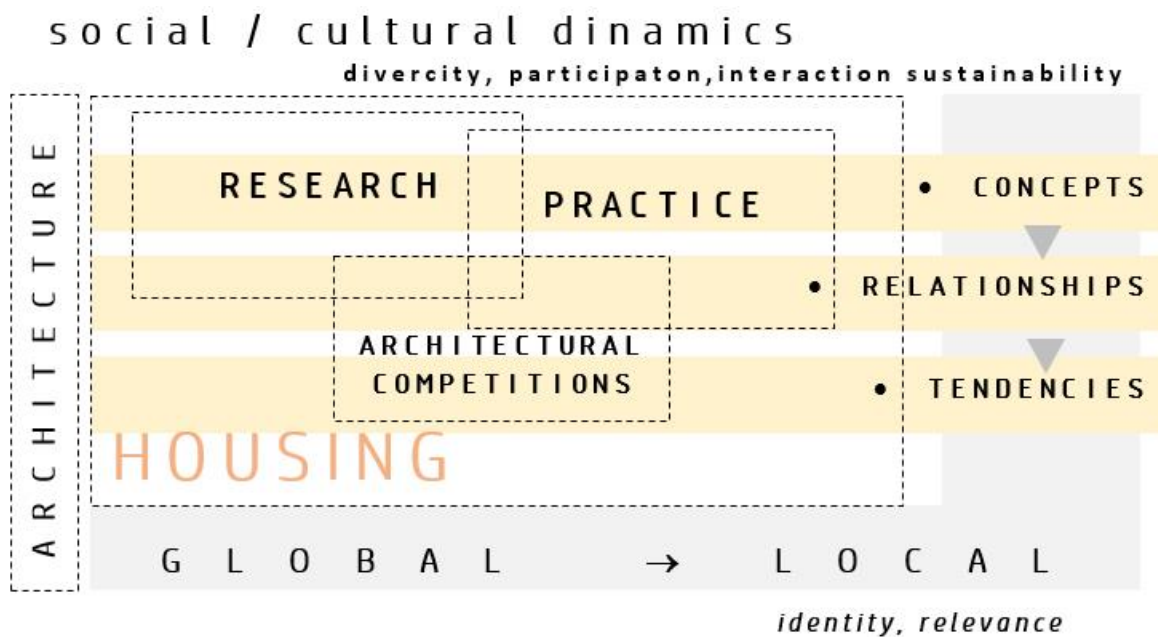


Fig.1 Framework of the Research

Three main components were used in the evaluation (Fig 1)

- Research Environment / Literature
- Practice / Architectural Production
- Architectural Project Competitions

Within the scope of the study, each of these components was examined through various cases, and housing-global / local relationship was tried to be understood / make clear through these cases and the concepts they are based on.

2. Study Area

2.1 Research Environment / Literature

The first of the three main components that constitute the framework of the research is investigations performed on housing issue in Turkey. How do architectural researchers deal with the issue of housing on the axis of globalization? The study sought answers to this question through theses, articles and books.

2.2. Practice / Architectural Production

The history of sheltering and housing in Turkey go back a long way. The traces of many cultures that have accumulated / overlapped, lived side to side over the centuries can be seen on this history. But, Istanbul undoubtedly offers the most efficient stage for studies that can be done on housing issue in Turkey. In this study, the case of Istanbul was applied in order to investigate the effect of globalization in the current architectural environment.

2.3. Competitions

Accordingly, investigation of that how the pluralist and dynamic structure of architectural project competitions, an important component of the architectural environment, supporting original and innovative ideas, will act when the matter of discussion is housing, will contribute to understand the current situation and make evaluations about the future.

2.4. Holistic Evaluation

Housing, the issue of the study, was investigated through three different parameters in the case of Turkey. Accordingly, the main concepts discussed in respect to housing / global / local, and visible effects of globalization on housing were tried to be revealed.

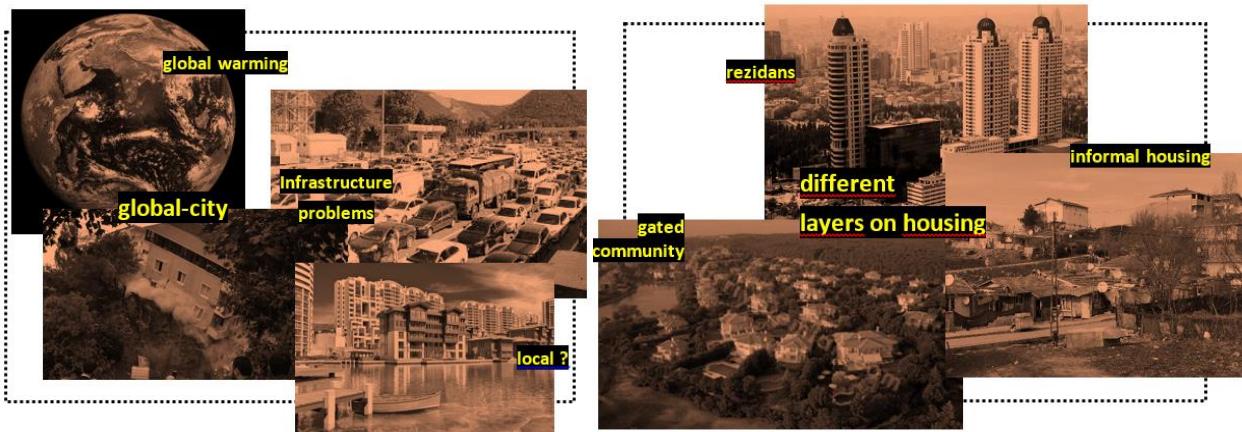


Fig. 2 1. Fragment- Global City in Studies **Fig. 32.** Fragment- Different Layers on Housing in Istanbul



Fig. 43.Fragment- Housing Competitions

Table 1 HolisticEvaluation

researches	current trends	housing competitions
view on the housing's different faces		
1.Fragment	2.Fragment	3.Fragment
Global warming	Indoor housing estate	Urban identity
High rise housing	Residences	Conventional House
Social housing	Slum	Social integration
	DISCONNECTION	(Re) Neighborhood

In the study, three ways (component) chosen to understand the impact of globalization on housing were tried to be described in Table 1, with three separate fragments. According to this, global warming, high rise housing, and social housing concepts were brought into the forefront in the 1 st fragment compiled from

the studies of the researchers; gated communities, residence and slum concepts in the 2 nd fragment which tries to reveal a section from the current situation in the housing environments; urban identity, conventional housing, social integration and neighborhood concepts in the 3 th fragment representing the competition environment which has a significant potential for both architectural design research environment and housing production environment.

Conclusion

It can be said that the main reason why the concept of localization itself and / or the strategies related to this concept are required for globalization discussions is global networks, and concern about that basic values of the society and characteristics that create/hold together the society can be destroyed/corrupted in this process. On the other hand, according to Kuban (2000), architecture declaimers have to evaluate every new concept coming onto the market, from architectural perspective, which is a condition of following latest developments in contemporary architectural culture. However, the concepts of "localness " and "globalization" should be avoided of being used as artificial representations. In this way, architecture can begin to rethink localization in the globalization process and global market (Yazgan, 2003). According to Çaylan, the diversity specific to different places and cultures may continue to exist as long as it is redefined within the framework of the transformed cultural dynamics. The acceptance of the dynamic structure of place as a data will both allow the definition of a modern and timeless "local sensitivity" to be made, and the disintegration of the artificial and infertile universal - local polarization in architectural discipline.

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Sandman, Helena & Levänen, Jarkko

ORAL&PAPER Presentation



Global multi-disciplinary research group at Aalto University as a doctoral candidate in the design department at Aalto University. Her focus is on user-centered empathic design where she uses architecture as an empowering tool striving for social sustainability. She is also founding member of Ukumbi NGO providing architecture as a means of development and a partner in Hollmén Reuter Sandman Architects Ltd as well as owner of Helena Sandman Ltd. Helena has been teaching multidisciplinary student teams in project-based slum upgrading since 2009 and is currently teaching the Interplay of Cultures master level studio course at the architecture department at Aalto University.

Architectural Design for Maternal Health

Empathic Design enabling sustainable replicability

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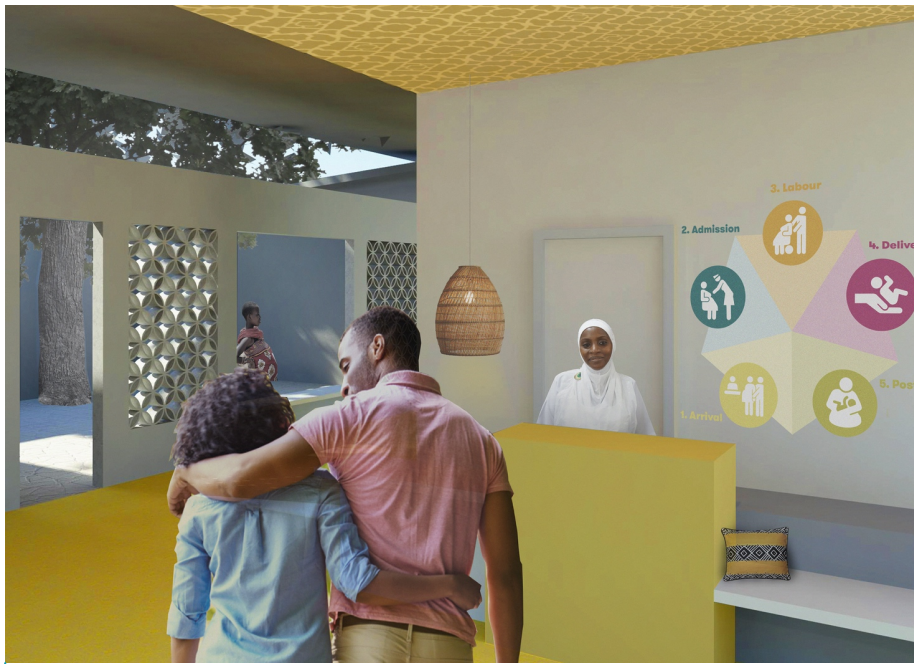
Summary:

Simultaneous replication and customisation represent a paradox. In this paper we ask how replication and customisation can be brought together to reuse ideas and solutions in multiple places and situations to solve global problems in a sustainable way also on a local level. The study is done through action research of a labour ward concept for low-resource settings. The outcome of the paper shows that if the concept is implemented according to empathic design principles, taking the locally attachable aspects into account, it is possible to replicate a concept sustainably.

Keywords: Maternal health; empathic architecture; empathic design; user engagement; healthcare design.

Abstract:

Designing sustainably with empathy would normally mean custom-made design. The idea of replication is contradictory to that. In this paper we discuss how replicable concepts can be sustainable in different local contexts. Sustainability can be enhanced as a principle in replicable concepts, however many aspects of sustainability relate to local circumstances, such as local climate conditions, available resources and local habits. This suggests customised design, even though simultaneous replication and customisation are paradoxes. We ask how customisation and replication can be brought together to reuse ideas and solutions in multiple places and situations to solve related worldwide problems in a sustainable way also on a local level.



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Welcoming entrance space rendering

We study the design process of a labour ward concept for low-resource settings through action research. The project in focus is multi-disciplinary and funded by Bill and Melinda Gates Foundation. The first phase of the project resulted in a concept that was planned to be replicable. The second phase constitutes the first implementation of the concept in an existing facility in Balasore, India. One aim of the design project is to attract a greater number of women to deliver in health care facilities as an alternative to home delivery, to decrease the number of child and maternal deaths. The impact of an unpleasant birthing experience in general, and also related to the physical space, if it is unclean and packed with people, is additionally to physical also psychological (Liljestrand 2016). Another aim is to improve the quality of care and through that the labour experience of the woman. The quality of care is defined in a way that dignity and worthiness of the patient is central to everything (Meguid 2016). Improving architecture is one way to engender dignity and enhance wellbeing (Hollmén et al. 2018). The design focuses on the flow of the labour journey in the architectural space to create order in a situation that otherwise would appear chaotic for the woman. Chaos can easily evoke fear while order evokes fate. The concept development was based on a problem-based approach following principles of social and environmental sustainability as well as empathic design.

The data used for the analysis of the implemented prototype is a base-line survey done before the implementation and a follow-up survey after the refurbished labour ward have been in use for one month. In the theory we develop a lens that is based on sustainability and empathic design principles. With the help of the lens we will delimit the perspective of the study of the existing situation in the labour wards to three core design aspects: flow, wellbeing and environment.

The purpose of this study is to understand how an empathic approach and the use of methods borrowed from Empathic Design can attach a replicable concept locally to varying cultural settings and furthermore, through the local attachment make the design sustainable. Empathic Design suggest a sensitive approach that can support the architect and other stakeholders to understand diverse and transformative conditions of people in different cultural and social settings. (Koskinen et al. 2004, Mattelmäki et al. 2014). Even if a replicable concept in itself would be designed as sustainable, some of the aspects will not be sustainable if not modified according to local circumstances and local use. Based on the analyses we are capable to define what constitutes the replicable concept and what aspects needs to be modified locally, to obtain a sustainable result. The outcome of the paper shows that if the concept is implemented according to empathic design principles, taking the locally attachable aspects into account, it might also be possible to replicate a concept sustainably. As conclusion we argument, that this case study tells an empirical example of how sustainability and empathic design principles are possible to use in practice while developing a design concept.

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**Extended Abstracts for
Session A2**

METHODS & HISTORY

Room A215

Chair: Kristo Vesikansa

10th Architectural Research
Symposium in Finland

ATUT 2018

*Global North – Global Challenges
and Local Responses
in Contemporary Architecture*

Address: Otakaari 1X, Espoo.
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Porzilli, Sara:

ORAL&PAPER Presentation



Sara Porzilli is Architect and European Ph.D. graduated at the Department of Architecture of the University of Florence, Italy. Her specialization is laser scanner survey and digital system for the documentation and representation of the environment and architecture.

Now she is having a Post Doctoral Researcher Position with a Marie S. Curie Fellowship at the School of Architecture of the University of Oulu (Supervisor: Prof. Anna-Maija Ylimaula. email: ylimaula@oulu.fi). Duration of the contract: 24 months. Title of her research project: "Preserving Wooden Heritage. Methods for monitoring wooden structures: 3D laser scanner survey and application of BIM systems on point cloud models".

Since 2009 she collaborates continuously in the academic field, supporting the teaching activities at the Department of Architecture in Florence first, and at the "Department of History of Architecture and Restoration Studies" in Oulu now. Thanks to fellowships, teaching assignments and specific project funding she took part in significant laser scanner survey projects as: the Pogost Complex on Kizhi Island (Russia), Masada Fortress (Israel), Uffizi Museum in Florence (Italy), Nativity Church in Bethlehem (Palestine), Alvar Aalto sauna and buildings (Finland).

Digital documentation in Architecture

Methods of analysis for the preservation and development of our Nordic Built Heritage

Sara Porzilli sara.porzilli@oulu.fi

Summary

This contribution put forward a reflection on the ambit of the valuable potentialities of digital methods and techniques for the documentation of our Nordic environment and architectural heritage. Theoretical and practical processes of knowledge should not ignore traces of the past, old buildings and traditional construction testimonies. On the contrary, they should represent the starting points for new coherent, sustainable and harmonic developments without any segregation into standardized procedures of urban development.

These themes are argued through the presentation of the research activities carried out on case studies at the urban and architectural scales situated in Oulu area.

Keywords: Digital documentation, cultural heritage, laser scanning, digital survey, Photogrammetry, preservation.

Short bio:

Sara Porzilli, School of Architecture, University of Oulu – Finland. Department of "History of Architecture and Restoration Studies". Email: sara.porzilli@oulu.fi

Extended abstract (1000 words)

The work presented is included in the European Project entitled *Preserving Wooden Heritage*. Even if the application of the analysis focuses timber architecture, methods and procedures used are always compared and described in order to be applicable to architecture in general, considering both urban and building scales. Two cases are presented: the wooden neighborhood of Raksila in Oulu, and a second case at the architectural scale, which is a private Villa with sauna from Alvar Aalto's works in Laanila area, Oulu.

The study of the past, of the ancient and historical architecture have always represented a theoretical and practical process of knowledge for the understanding of an architectural and environmental identity. The main reason has been always the necessity to get information from our ancestors about the specific background of a place, deepening styles, constructive solutions, traditions and pick from the past a better consciousness about the unsolved problems¹ in order to operate in the present state as much as possible in harmony and accordance with the existent. The question about how to link the contemporary architectural practice with the tangible and intangible elements² of a site is still representing the focus of the debate in our design operations.

From a theoretical point of view already at the end of the XIX Century experts in architecture and archaeology such as Giuseppe Fiorelli, Camillo Boito, Gustavo Giovannoni began the production of documents aimed at describing the principles necessary for the conservation and restoration of monuments. Later on the International Conference in Athens on 1931, which produced the "Athens Charter of Restoration", synthesized the main arguments related to the concept of monument up till 1964-'66 when it was almost completely abandoned the use of the simple term of *monument* in favour of *cultural heritage* (1975 Declaration of Amsterdam). It represented a more precise term, which included also spiritual, cultural, economic and social values, closely related to the identity of the object analyzed. (Niglio 2005, 134).

1883	The Italian Conservation Charter, Camillo Boito
1931	The Athens Charter
1932	The Italian Restoration Charter, Gustavo Giovannoni
1938	Instructions for the Restoration of Monuments
1964	The Venice Charter
1972	The Italian Restoration Charter
1975	European Charter of the Architectural Heritage
1975	Declaration of Amsterdam
1987	The Washington Charter on the Conservation of Historic Towns and Urban Areas
1991	The Florence Charter on European Heritage
1994	The Nara Document on Authenticity
2008	Charter on the safeguarding of Palestinian historic towns and urban landscapes, Bethlehem
2011	The Madrid Document

Fig 1. The main charters and international documents analyzed, involved in the field of the restoration and preservation of heritage.

For these reasons, the research proposes a specific approach in which multidisciplinary methodologies of documentation together with updated technics are deepened in order to test new digital methods for the documentation of our Nordic Heritage. The work approach intends to highlight not only the architectural value of the cases studied and the methods used, but also wants to increase and improve their cultural, symbolic and environmental importance.

¹ In other words the necessity to understand the *genius loci* of a place, *the spirit of a place*, for a detailed literature consult Norberg-Schulz C., *Genius loci : paesaggio, ambiente, architettura*, Milan: Mondadori Electa, 2016.

² The concept of tangible and intangible heritage is having today a central role in the academic debate. How to define these two categories, recognise them and work in practice for discovering the constituent elements have been the main questions addressed during two important conferences:

1. International Conference at the University of East London entitled "*Tangible – Intangible Heritage(s) – Design, Social and cultural critiques on the past, the present and the future*"
2. XL International Conference of representation Disciplines Teachers entitled "*Representation / Material / Immaterial. Drawings as (in)tangible representation*", held in Milan during 13-14-15 September 2018.

For a detailed literature, consult the act of the conferences.

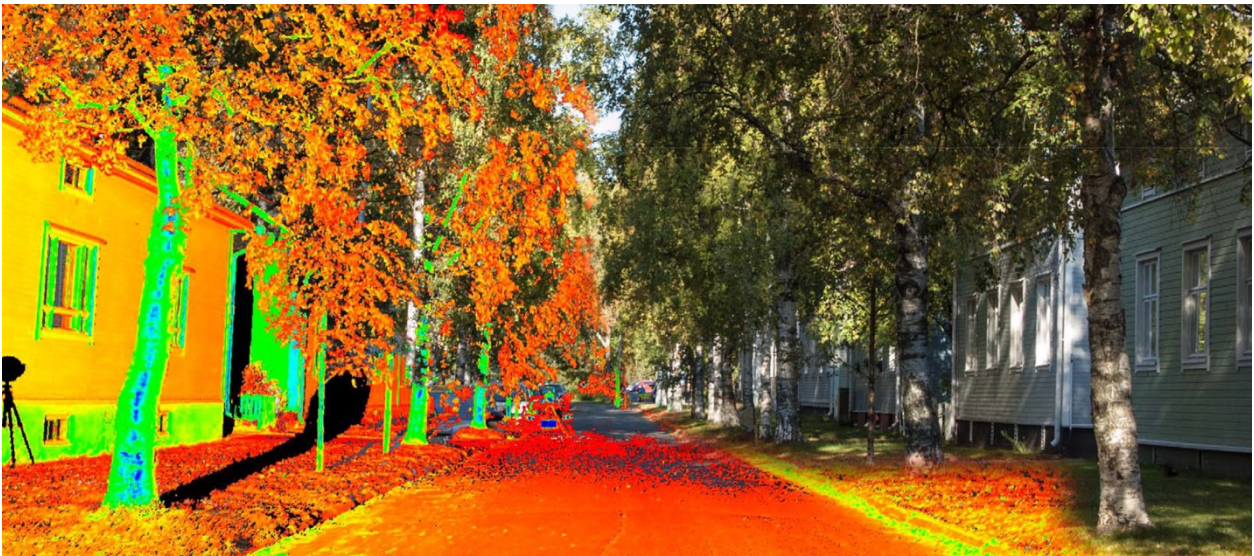


Fig 2. The case study of Raksila neighbourhood in Oulu, with the overlapping of the point cloud.

During the last ten years, in fact, technology has literally revolutionized the approach of technicians, transforming theoretical analysis and investigation to something dynamic and more practical. Within digital database, it is possible to link different levels of information putting them in mutual relation helping the elaboration of new significant considerations. Investigations, inventory catalogues and digital 3D laser scanner survey are needed for understanding the development of architecture, neighbourhood or city, as well as new interpretation of restoration theories.

Thanks to these new tools and equipment today architects and urban planners are having new interesting and better chances to rely on the contribution of new technologies and enhance their work by using digital systems for surveying and documenting. From a theoretical point of view in fact, declarations, charters, guide lines appear complete, but in practice methods and procedures still need to be deepened in order to build up proper scientific guidelines for the preservation of the built heritage.



Fig 3. The case study of Villa Lehmus designed by Alvar Aalto in Oulu, views from the point cloud, exterior and inner parts.



Fig 4. The case study of the wooden sauna designed by Alvar Aalto in Oulu, views from the point cloud, exterior and inner parts.

Two main objectives settle this research: the necessity to improve and develop updated digital survey techniques applied specifically on Nordic Heritage; the volunteer to produce detailed inventory analysis with the main scope to increase the state of the art on these cases analyzed.

For both the cases Raksila and Aalto's works, the study started with a careful planning of practical phases involved. Different scales of investigation, which from the general aspects includes progressively the details, produce in fact different level of analysis and of values. This system of investigation contribute the elaboration of a multidisciplinary research that consider the object in its whole material and immaterial configuration. Three main criterions have guided the actions:

- Preliminary recognition of the area, with archive investigations and historic analysis;
- Definition of objectives, expected results and limits;
- Organization of the practical survey activities.
- According with the objectives defined, the second step concerns the practical activities concentrated in collecting updated information and metrical data on site:
- Laser scanner survey, from which obtain a complete point cloud both of the architecture and its environment.
- Topographic survey, in order to georeferenced the point cloud;
- Direct survey with simple tools for measuring details and parts which cannot be surveyed by indirect survey;
- Photo Documentation for general observations, for the photo-mapping of facades, sections, floor plans;
- Photo modelling reconstructions, by using the possibility to reproduce from 2D photos 3D models with the so-called *structure-from-motion* process;
- Census activities, for the creation of descriptive inventories and technical atlases of the buildings investigated;
- Additional activities: landscape analysis, studies related to environmental and cultural aspects by using interviews and external supports from other specialized technicians.

Study of architecture and its environment, engineering approaches and experimentations, dissemination needs, sociological analysis and historical and archival studies should always start today from survey recognition on site and find a deep help from the scientific sector of the digital survey and representation.

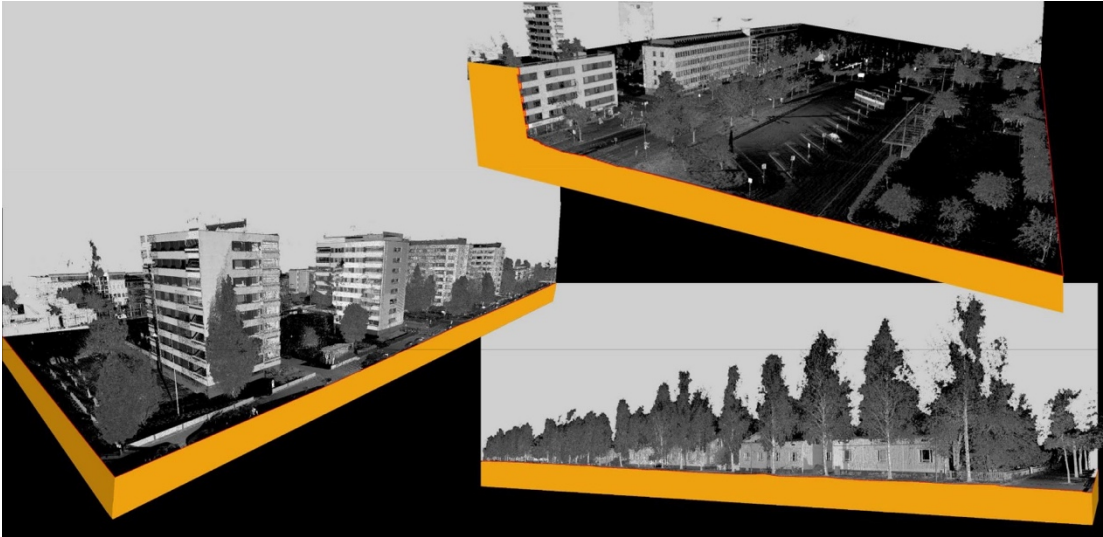


Fig 5. Views of the 3D model of the point cloud of Raksila neighbourhood.

Survey activities produce always a big amount of updated documentation and information, characterized by different typologies of data: metric databases of the point clouds, vector 2D drawings, 3D models and thematic maps produced by the combination of the different levels of information.



Fig 6. The general map of Raksila neighbourhood updated with the metrical information obtained from the laser scanning survey.

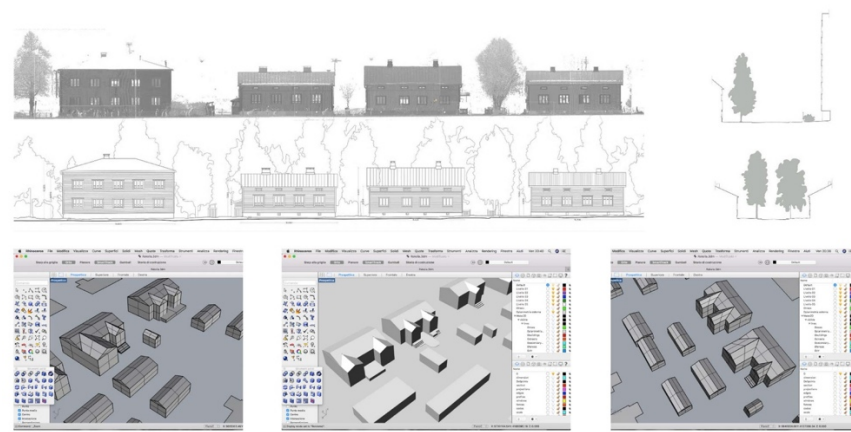


Fig 7. Work in progress. From the point cloud it is possible to produce 2D CAD drawings and build 3D models by using different softwares including BIM systems.

According with these new digital advancements, guidelines and methods for preservation need today to be always updated and implemented. The research is having in fact the important challenge of operating within the principles listed by the documents mentioned above, for supporting technicians and operators involved in different types of activities.



Fig 8. Description of one street front of Raksila neighbourhood. CAD drawings allow the check of measurements. Photomaps define the real image of the place and give information on colors. The map redrawn from the point cloud has been enriched with the description of the system of trees, paths and roads with identification of different materials.

Project info

Address: RA_211, Syykäku 23, 1928

Dating: 1928

Typology: Terraced house, House on site, Tower house

Function: Residential, Residential + commercial, Residential + offices

Housing Units: 1, 2, 3/5, 6+

Window frames

Analysis of damages: Structural/Physical, Chemical/Biological, Antropic

Prospect on the road

Main prospect: On the road, On the back, On the side

Entrance: Abitabile, Not abitabile, Absent

Basement: Abitabile, Not abitabile, Absent

Bulging volumes: Canopy, Balcony, Veranda, House entrance, Roof window, Basement entrance, Absent

Structure: Masonry, Concrete, Wooden

Roof: Flat, 2 tiles, 4 tiles, 5+

Base material

Painted concrete, Concrete at sight, Concrete covered with stone slabs, Cement-coated concrete

Facade cladding

Wood, Plaster, Concrete, Concrete prefabricated panels, Bricks

Warping

Horizontal, Vertical, None

Color

NCS S 1030-Y10R, NCS S 6502-B

OPEN AREAS

Attached volumes: Greenhouse, Technical room, Sauna, Storage building, Outbuilding, Garage

Volume function: Greenhouse, Technical room, Sauna, Storage building, Outbuilding, Garage

Paving: Asphalt, Gravel, Grass, Stone

Parking: Uncovered, Underground, Canopy, Absent, Garage

Vegetation

Betula, Abies, Acer Hyemalis, Cornus Alba, Hamamelis Virginiana, Sorbus Aucuparia, Acacia Spinosa

Fig 9. Example of digital inventory for the description of buildings in Raksila. The record card includes all the information collected on field through the survey, CAD drawings, 3D modelling, investigation on site and historical info.

Today the main damage to heritage is happening where there is a lack of education in understanding the cultural context³. Historical memory and preservation of a heritage passes also through a collective validation of the cultural significance that a heritage brings with itself. Spreading its documentation contributes to the formation of a common awareness of the cultural value of that object and therefore of the importance of its protection. In conclusion, this research is intending to promote the importance of the triangle theory-practice and action in our digital world era.

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³ As delared in the foreword of the Madrid Document (2011). Web reference: <http://www.icomos-isc20c.org/madrid-document-archives/>

Pyykkö, Saara

ORAL Presentation



Saara Pyykkö is a colour researcher, colour designer and educator. She studied at Aalto University, graduating with Master's degrees in art education and landscape architecture. Her on-going doctoral research addresses the question of the architectural colour design process of new neighbourhoods, focusing on the detailed plan and the design guidelines of a new residential areas.

Saara Pyykkö on väritutkija ja värisuunnittelija. Tällä hetkellä hän valmistelee väitöskirjaa Aalto-yliopistoon Arkkitehtuurin laitokselle uusien alueiden arkkitehtuurin värisuunnittelusta. Kohdeena on kymmenen aluetta 2000-luvulta. Osana suunnittelun tutkimuksen väitöskirjaa hän on suunnitellut Koivusaaren arkkitehtuurin värit tulevaan asemakaavaan. Hän on koulutukseltaan maisema-arkkitehti, taiteen maisteri ja taidemaalari. Pyykkö opettaa myös Aalto-yliopistossa Väri-valo-tila -kursssia.

Kaupunkikuvasta asemakaavaan ja korttelikortteihin

Väriyöpaja uuden asuinalueen kaupunkisuunnittelun välineenä

Saara Pyykkö

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Yhteenveto

Tutkimus on osa uuden alueen arkkitehtuurin värisuunnittelua käsittelevää suunnittelun tutkimuksen väitöskirjaa. Kirjoittaja on toiminut värisuunnittelijana Helsingin Koivusaaren asemakaavaprosessissa. Väriyöpaja on yksi Koivusaaren värisuunnitteluprosessin kahdeksasta vaiheesta, ja se järjestettiin syksyllä 2017. Osallistujina olivat värisuunnittelija-väritutkijan lisäksi kaksi projektista vastannutta arkkitehtia sekä maisema-arkkitehti. Väriyöpan tarkoituksena oli keskustella ja määritellä yhteiset tavoitteet tulevaa asemakaavaa täydentävien arkkitehtuurin väriä ja materiaalia koskeville korttelikortteille. Työpaja sisälsi alustuksen kahdeksasta muusta pääkaupunkiseudun uudesta alueesta. Työpajassa keskusteltiin eri alueiden arkkitehtuurista, erilaisista tavoista määritellä ja ohjata tulevan arkkitehtuurin väriä sekä Koivusaaren tavoitteista. Litteroidun ja analysoidun aineiston tulokseksi saatiin yhteiset tavoitteet tuleville korttelikortteille, värisuunnittelulle, SkechUp-mallityöskentelylle, toivotulle kaupunkikuvalle, alueen uudelle identiteetille ja tulevalle arkkitehtuurille.

Keywords:

Environmental colour design, colour design, colour research, urban design, detailed plan, design guidelines, kaupunkikuva, asemakaava

Johdanto

Tällä hetkellä kaupunkisuunnittelussa keskustellaan asemakaavan yleissitovuuden vähentämisestä osana normien purkamista. Haasteena onkin, miten tulevaisuudessa tasapainoillaan normien purkamisen ja kaupunkikuvallisten kysymysten kanssa, jos kaupunkikuvallisia asioita ei mietitä jo kaupunkisuunnitteluvaiheessa, määrätä asemakaavassa tai ohjeisteta rakennustapaohjeissa. Yksi näistä kaupunkikuvallisista osaluista on uuden arkkitehtuurin värien ja rakennusmateriaalien suhde maisemaan ja aiempaan arkkitehtuuriin.

Työnalla oleva arkkitehtuurin suunnittelututkimuksen väitöskirjani käsittelee 2000-luvun aluesuunnittelua värin näkökulmasta. Tutkimuskohteena on kymmenen valmista uutta asuinalueutta pääkaupunkiseudulla sekä Koivusaaren värisuunnitteluprosessi, jossa olen toiminut itse värisuunnittelijana. Tutkimuskysymykseni on: Millaisien värisuunnittelumenetelmien tai asemakaavan ja eri rakennustapaohjeiden väriohjeistuksien avulla liitetään uusi alue kaupunkikuvallisesti aiempaan arkkitehtuuriin ja maisemaan sekä suunnitellaan uudelle alueelle oma identiteetti?

Olen toiminut värisuunnittelun konsulttina Helsingin kaupungin Koivusaari-projektissa 2016-2017 ja täydentänyt suunnitelmaa 2018. Asemakaava on valmistumassa alkuvuodesta 2019. Olen tehnyt värisuunnittelutyön tiiviissä suunnittelijan aikataulussa ja analysoin Koivusaaren värisuunnitteluprosessin kokonaisuudessaan osana väitöskirjaa myöhemmin. Tässä konferenssipaperissa kuvattu analyysivaihe on osa alkuperäistä värisuunnitteluprosessia.

Tutkimuksessani (Pyykkö, 2018) olen löytänyt Koivusaaren värisuunnitteluprosessissa kahdeksan eri suunnitteluvaihetta sekä verrannut Koivusaaren tapausta muihin laajojen alueiden värisuunnittelu- ja analyysimenetelmiin (Smedal, 2001, Lancaster, 1996). Ensimmäiset neljä Koivusaaren värisuunnittelun vaihetta olivat *johdanto, analyysi, luonnokset ja värikonsepti* sekä *perspektiivikuvat asemakaavan luonnokseen*. Seuraavat neljä vaihetta olivat *väriyöpaja, tarvittavat lisäanalyysit, alueen ja korttelin värisuunnittelu* sekä *asemakaava ja korttelikortit*. Tavoitteena oli laatia Koivusaaren arkkitehtuurin väriä ja materiaalia koskeva ohjeistus, joiden avulla uusi alue sovitetaan maisemaan ja suunnitellaan Koivusaarelle oma identiteetti. Korttelikorteilla tarkoitetaan lähiympäristön suunnitteluohjetta, jossa arkkitehti saa A4-kokoisen kortin tai tiedoston Koivusaaresta sekä toisen kortin Koivusaaren omaa suunnittelun osa-alueetta koskevista ohjeista.

Väriyöpajan kuvaus

Väriyöpajaan osallistui kaksi Koivusaaren asemakaavasta vastannutta arkkitehtia sekä maisema-arkkitehti. Työpajan tavoitteena määritellä tavoitteet värisuunnittelun pohjaksi toivotusta kaupunkikuvasta, tulevasta arkkitehtuurista sekä arkkitehtuurin suhteesta maisemaan. Työpajan aluksi pidin alustuksen kahdeksasta muusta alueesta sekä niiden arkkitehtuurin väriä ja materiaalia koskevista ohjeista. Lisäksi esitin laajan kuvamateriaalin toteutuneista kohteista. Olin pyytännyt aiemmin työpajaa varten kaupunkisuunnittelijoilta valokuvia kotimaisista ja ulkomaisista kohteista, joissa oli toivottua ja ei-niin-toivottua arkkitehtuuria ja ympäristörakentamista. Keskustelimme myös kriittisesti aiemmista Koivusaaren analyysi- ja suunnitteluvaiheista sekä niissä määritellyistä Koivusaaren tavoitteista.

Väriyöpajan analysointi

Väriyöpaja eroaa aivoriihestä tai tavallisesta kokouksesta seuraavasti: noin kahden tunnin keskustelu äänitettiin, litteroitiin ja analysoitiin. Ensin litteroidusta tekstistä erotettiin *väripuhe*, eli keskustelu, joka käsiteli väriä ja arkkitehtuuria. Sitten näille lauseille tai kommenteille annettiin otsikko, sen mukaan, mihin asiaan väripuhe liittyi. Tässä koodauksen ensimmäisessä vaiheessa (Saldana 2016) aineistosta nousi otsikkotasolla seuraavat teemat: 1. *Värisuunnittelun tavoitteista*, 2. *Värisuunnitelmassa vältettävistä asioista*, 3. *Maisemassa, isossa mittakaavassa ja kaupunkikuvassa huomioitavista asioista*, 4. *Koivusaaren arkkitehtuuria ja osa-alueita koskevia näkökulmia*, 5. *SkechUp-mallityöskentelyssä huomioitavaa*, 6. *Arkkitehtuurin detaljeihin liittyviä asioita* sekä 7. *Korttelikorttien tavoitteita*. Seuraavaksi ryhmiteltiin kunkin otsikon alle väriyöpajan väripuhe. Sama lause saattoi käsitellä samaan aikaan värisuunnittelun tavoitteita, arkkitehtuuria, SkechUp-mallityöskentelyä sekä korttelikortteja, jolloin se sijoitettiin usean eri otsikon alle.

Analysointi tuotti konkreettista tietoa kustakin osa-alueesta suunnittelun avuksi suunnittelun eri vaiheisiin. Osa lauseista siirrettiin suoraan määrittelyksi tuleviin korttelikortteihin. Esimerkkinä mainittakoon periaate, jossa yksi rakennusmassa on aina julkisivuiltaan yhden värinen, mutta jos rakennusmassan pituus on yli 40

metriä tai enemmän kuin yksi lamelli, tulee julkisivu jakaa useampaan värialueeseen. Muiden asuinalueiden esimerkkien kautta keskustelu laajentui Koivusaaren ulkopuolelle. Positiivisten ja negatiivisten esimerkkien kautta tarkennettiin Koivusaarta koskevia tavoitteita tai suunnitteluperiaatteita, mutta myös rajattiin vältettäviä arkkitehtuurin väriin liittyviä asioita. Tällaisia olivat esimerkiksi liian intensiiviset punaiset tai 90-luvun pastellit sävyt puutaloalueelle sekä sameat tai tunkkaiset värisävyt. Väiräiskintää ja värikikkailua haluttiin myös välttää. Väriyöpajassa oli erittäin tärkeää avoin ja luottamuksellinen ilmapiiri, joka mahdollisti rakentavan ja kriittisen keskustelun. Värin ja arkkitehtuurin suhdetta kuvattiin ammattikielellä, mutta myös erilaisten mielikuvien kautta.

Väriyöpaja ja kaupunkikuva

Väriyöpaja oli viides Koivusaaren värisuunnitteluprosessin kahdeksasta eri vaiheesta. Aiemmat analyysit olivat tuottaneet tietoa suurmaisema-analyysien muodossa, mutta väriyöpaja selkiytti niitä visuaalisia arvoja, jotka liittyivät arkkitehtuurin väriin Koivusaaren sisällä. Väriyöpajan suunnittelijoiden välisen keskustelun analysointi osoittaa, että kaupunkikuvasta puhutaan eri skaaloissa. *Maisemassa, isossa mittakaavassa ja kaupunkikuvassa huomioitavista asioista* käsittelee suurta skaalaa vielä yhtenä kokonaisuutena. Tällöin rakennettu ja rakentamaton ympäristö ovat yhtä. Kaupunkikuva, suurmaisema, maisema eri vuodenaikoina muodostavat suunnittelun yhden skaalan, jossa rakennukset ovat osa maisemaa. Toinen värisuunnittelun skaala on itse Koivusaarta, sen osa-alueita, arkkitehtuuria, julkisivuja, näkymiä, katutilaa ja orientaatiota koskeva skaala eli väriyöpajan otsikko *Koivusaaren arkkitehtuuria ja osa-alueita koskevia näkökulmia*.

Värisuunnitteluni lähtökohtana on ollut ihmisen kokemus eri vuoden- ja vuorokauden aikoina kummassakin skaalassa. Värisuunnittelijana otin nämä yhteisesti määritellyt tavoitteet suunnittelun lähtökohdaksi värisuunnittelun eri vaiheissa. Kunkin vaiheen kohdalla palasin väriyöpajassa määriteltyihin tavoitteisiin ja ne toimivat reunaehtoina ja visuaalisina tavoitteina kahdessa suunnittelun eri skaaloissa, SketchUp-malli –työkentelyssä sekä lopullisissa korttelikorteissa.

Tulokset ja keskustelu

Vaikka tutkimukseni käsittelee ensisijaisesti uusien alueiden värisuunnittelua, niin arkkitehtuurin värin kautta se avaa näkökulmia laajempaan yhteiskunnalliseen keskusteluun kaupunkikuvasta, uusien alueiden identiteetistä ja atmosfääristä. Koivusaaren tapaus ja väriyöpaja tarjoavat yhden menetelmän, jossa kaupunkisuunnittelijoiden ja konsultin yhteiset sekä yhdessä määritellyt tavoitteet ovat selkiyttäneet kaupunkikuvallisten asioiden huomioonottamista asemakaavan suunnittelussa. Väriyöpaja tuo myös näkyväksi sitä käsitteitä, joita pohditaan värisuunnittelun eri skaaloissa. Tutkimukseni seuraavat vaiheet selventävät vielä enemmän sitä, mikä on arkkitehtuurin värin ja materiaalien merkitys kaupunkikuvassa, sekä miten eri tavoin käytetään käsitettä kaupunkikuva.

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Sayed, Neha & Díaz-Kommonen, Lily

ORAL&PAPER Presentation



Neha Sayed is basically an architect from Mumbai. Neha has done a combination of architectural practice and teaching for last eighteen years. She did her masters in experience design from Konstfack, Stockholm, which added another skill of being a researcher. Her work in the masters was focused on developing user centered design and studying research methodologies to achieve the expected outcome. Since 2009, apart from teaching and architectural practice She has been conducting research within communities and their relationships to space and in turn place.



Lily Díaz-Kommonen is professor and leader of the Systems of Representation research group in the Aalto University, Media Lab. Her research work includes projects in areas such as information visualization, design and implementation of digital archives and interface design. She has also designed tools such as Image ImaNote (Image and Map Annotation Notebook) and SOL (Soft Ontology Layer). As an educator, she has developed and implemented curricula in new media and visualisation. In her spare time, she is interested in gardening.

Place As Flux: A Visual Narrative As A Tool For Research

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Keywords: Place, Visual narrative, Local history, Cultural identity, Geospatial analysis

Abstract

A Place generated through Architecture is a mirror of who we are and who we aspire to be as it embodies our cultural narrative in its physicality, i.e. its material configuration. In communities that adhere to traditions it acquires a character through sustained and gradual evolution, a cultural flux which reflects change in occupation, development in technology and infrastructure. This evolution is an intrinsic process within which varied localised indigenous practices are contested by new foreign ideas. Thus cultural flux is a reflection of this very contested space, which Martin Nakata refers to as *Cultural Interface* (Nakata, 1997, 2007). Our aim in this paper is to investigate this contested interface as it gets manifested in the intense architectural configuration and in the practice of the communities that inhabit it.

We present here a research conducted in a three-hundred-years-old market square called, 'Tapal-Naka' in a suburban town of Panvel, Navi Mumbai, India. Last four generations of one of the authors of this paper have grown in this market square making this research auto ethnographic. It allowed us an unprecedented access to the community which was the primary source of our investigation. Panvel is a port town and the municipal headquarter of at least forty villages. Extensive trade of rice and salt took place in Panvel connecting it with the major trade centers in the north and south of the country. About thirty five rice mills were active in and around Tapal Naka where two major streets connecting the surrounding villages cross each other. Farmers came to exchange the crop for other livelihood goods. Recently this all is changing rigorously as Panvel and its surrounding land finds itself in the middle of large scale city and industrial

development. The new international airport is located about two kilometers from Tapal Naka. Going through this tumultuous activity the merchant community in this precinct have maintained their practice of trade for generations. The merchants who once sold, rice and salt are now trading in commodities like groceries. Part of the street is rapidly converting into a jewellers market. Maintaining the traditional ethos of the trade the market place is adopting new challenges.

The research was conducted during the course of last two years where we adopted a multidisciplinary approach to study the precinct. We began with narrative workshops within the community to understand how they conceive the place in its current configuration. This led us to understand the traditional indigenous knowledge that the community beholds about its existence and relation to the place. We have a sample of about forty five narrative interviews covering all existing communities and practices. We adopted the urban design and planning research methodologies such as suggested by McGlynn et.al for studying responsive environments (McGlynn et.al, 2013) which led us to understand the urban fabric in its flux. The core of our investigative methodology have remained in anthropology, which is always weaved into concrete documentation methods of architecture, urban design and planning. Hence the mapping of physicality was always combined with narrative interviews.

This paper is an attempt in creating a visual narrative of the cultural interface in flux with the use of softwares. We have photo documented a selected stretch of the main streets crossing at the square for the purpose of photogrammetry. For this paper, we have chosen a specific example of three adjacent plots in this market square. The mapping compiled in hard data will be presented as 2D layers in GIS. With the help of mesh modelling of the photogrammetry outputs we plan to portray the visual narrative as a progressive animation in a CG software suit called Blender.

This process of visualising a narrative is based on Tim Ingold's discussion of *Making* (Ingold, 2013) where the physicality of things and their users are in a constant correspondence through which they establish each other acquiring their current configuration, in the case presented here, through change or mutation. For us, this correspondence is the visual narrative where the physicality can be seen in flux. Wenger and Lave's *Communities of Practice* provide more in depth understanding of how this very correspondence is situated and localised as a practice, in this case, trade (Lave and Wenger, 1991, Wenger 1999). The narrative is not only an aide in visualising change but also analysing its causes. Martin Nakata's *Cultural Interface* helped us to understand the causes and their complexity (Nakata 1997, 2007). This research contributes by proposing a methodological approach to understand and analyse the changing nature of Place by identifying factors that contribute to the flux and their roles.

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Heikinheimo, Marianna**ORAL&PAPER Presentation**

DSc (Architecture), MSc (Architecture), M.A. (Fine Arts) Marianna Heikinheimo is a Helsinki based architect, and the managing director of Ark-byroo Architects. Her research interests cover architectural history & theory, design thinking methodology, real estate development and urban planning. Her broad educational background supports the interdisciplinary approach she is involved with.

Prototyping New Use

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Summary

Global megatrends, such as digitalisation, urbanisation and demographic change, are impacting our lifestyles and thus the built environment. Thus, numerous facilities of different typologies, some of cultural-historical significance, lose their original purpose. Still, buildings need to be useful to remain. This study endeavours to develop new user-driven methods to succeed in conversions.

Keywords: green structure, compact city, Helsinki City Plan, paradigm shift

Extended Abstract**Why Prototype?**

The design thinking involves creative problem definition and problem-solving from an end-user perspective upwards. In the real estate developments, the process order is commonly somewhat reverse. We normally define a function that fits the building as the use is determined in the general and detailed plans, which are difficult to change. Also, the Venice Charter of ICOMOS, the predominant doctrine of conservation, states that new purpose should only be permitted within certain limits. Firstly, buildings should remain socially useful, which points to the end-user and is in line with design thinking. Secondly it declared, that the lay-out and facades should not be altered.ⁱ The latter demand is challenging in today's context because some functions just end.

Design thinking approach starts from gaining an understanding of customer needs, motivations and experiences. In Tim Brown's words:

"...it is a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what viable business strategy can convert into customer value and market opportunity".ⁱⁱ

As scholars widely recognize innovation a principal source of differentiation, why not try to create value in a real estate development project by using these agile methods? The challenge of the design process is then to figure out what to create, and how to do it, to define the working principle. In the beginning of a complex real estate development project we only know the end value, we want to create.ⁱⁱⁱ This article observes a few European projects and discusses their attempts of reframing the problems.

Listening to the Customer

The value in use of real estate requires a good location, flexible dimensioning, and healthy, functional structures, which offer excellent starting points for conversions. Besides these unchallenged premises, the built environment intertwines cultural values, which often related to history. All these factors contribute to the economically, technically and socially balanced solutions from the end-user perspective. The two Warsaw cases of old industrial premises turned into new uses, make a strong statement for cultural quality.

The Polish developing company, Soho Development S.A., started to brand an old textile industry neighbourhood into a zone of artistic activity ten years ago. The developers firmly believed that they could create new quality by letting artistic ideas mix with the genius loci. In their view, Warsaw lacked such a distinct area.^{iv} The developer let select companies and artists put up studios in the area for a nominal free and managed thus to make an emotional impact and brand^v the development. The case of the 19th century Koneser vodka distillery is parallel to the Soho project.^{vi} The Praga Koneser Centre is a commercial mix-use project which contributes to the revitalisation of the district. The early settlers were again cultural institutions, which started organizing events in the area. The metro station is one of the results of successful cooperation between the private and public parties. The developers have also used architectural competitions as a tool to provoke site-suited solutions. The project goes on in stages, has been in the spotlights of MIPIM. The deputy mayor of Warsaw stated that the Praga district aims at satisfying its inhabitants.^{vii} Improving the quality of the environment by preserving its old identity has been the key to success in the Praga Koneser Centre.

The well-known 160 years old Carlsberg Brewery area in Copenhagen is transforming into a new gigantic mix-use district. Ten years ago, when the project started, the site was unknown to most Copenhageners as it had always been fenced off during the brewery's operational years. The developers decided to open the area bit by bit and allowed temporary use of vacated industrial buildings. Many artists organisations moved in and organised festivals. The Dansens Hus got a permanent status in the core of the new district. The overall solution is based learning by doing and acquainting the locals to the qualities of the district. In the real estate context, this equals to listening to the customers.^{viii}

Towards a New Methodology?

In Poland, private investors have become more aware of their role in creating attractive urban fabric. The ongoing conversions dealing with buildings of cultural-historical significance cover increasingly new typologies, such as shopping centres. By fitting new environments to the customer needs we can create long-term economic, technical and social gains. The examples also prove that private-public-partnerships bear fruit. Still, a private owner is more likely to be agile enough and bundle up relevant ideas. The best developments were done in cooperation, slowly enough.

Mixed-use has proved a valid tactic. In old settlements, parallel users are potentially a more viable solution than leaning on one. Several users minimise the economic risk of adjusting a building to the needs only one player. Mixed-use may require multiple simultaneous actions in the alteration works, a combination of conservation, pulling down and erecting new structures.

Jane Jacob's was open-minded of the use of old buildings, but recognised their need as part of the urban fabric in *The Death and Life of Great American Cities*, published in 1961:

"Cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them. By old buildings I mean not museum-piece old buildings, not old buildings in an excellent and expensive state of rehabilitation – although these make fine ingredients – but also a good lot of plain, ordinary, low-value old buildings, including some run-down old buildings".

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ⁱ ICOMOS (1964); Perkkiö (2007).

ⁱⁱ Brown (2017).

ⁱⁱⁱ Dorst discusses the challenges of a design process and recognizes abduction as the need to establish the identity of two unknowns in the equation. Dorst (2011).

^{iv} The Soho Development S.A. web page.

^v Hendricks writes about desires that steer people and define the zeitgeist. If designers can identify universal desires and translate them into insights, that can inform brand positioning.

^{vi} The Soho Development S.A. web page.

^{vii} Kosiura, Kłodaś and Kaczyńska 2018.

^{viii} The Leidsche Rijn in-fill district in the Netherlands is a well-known forerunner of a phased city planning process.

Kholina, Anna

ORAL Presentation



Anna Kholina is a researcher based at the Department of Aalto University. She looks at the process of urban transformation and asks how places and spaces become more urban in character. She uses qualitative methods to uncover the complex phenomena that defines urbanity and focuses on the embodied experience as a way to analyse spatial transformation.

What Makes Urban Nature Meaningful: Insights into The Role Of Natural Environment In The Finnish Suburban Context

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Summary

The article analyses images from Instagram posted publicly during one calendar year to get insights into the relationships between people and nature in a suburban context which is undergoing a process of urbanisation. It asks what makes the presence of nature meaningful for people and compares the contents of images with the two views on the role of nature in urban context, as a scenic resource and as a space for active engagement, suggesting to look at the contrast between the natural and the urban elements as a source of meaningful interaction between people and nature.

Keywords: Nature, urban, modernism, instagram, engagement

Abstract

The modernist monoculture gave rise to different architectural phenomena, many of which have local features despite the universal values at the foundation of modernist ideology. In Finland, local adaptation of modernist tradition influenced the way nature and the built environment interact in the suburban development. Due to an abundance of space and an ideology that valued the restorative benefits of nature, many Finnish neighbourhoods outside of the dense city core include forest belts and other natural elements. It is also a consequence of the relatively late urbanisation in Finland which emphasised a natural countryside environment as a healthier alternative to the unnatural city (Lappi, 2004). In light of today's intense urbanisation and densification of existing areas, there is a pending question of how to utilise the natural resources in the best and most efficient way, which leads to a more philosophical discussion about the value and the meaning of nature for contemporary urban dwellers.

This article uses a case-study method to advance this discussion. It looks at a suburban area with an extensive presence of nature, which is currently undergoing changes in the socio-material environment and is densifying its inner core. Apart from the environmental and social utility typical for modernistic urban planning (Hebbert 2008), nature is the key component which defines the character of the place and the

attitude of its inhabitants (Schroeder, 2007). The research focuses on the meanings that the nature holds for the people who live in the area or visit the area frequently: what do people value when it comes to natural elements and what makes the presence of nature meaningful to them? To answer this question, the research looks into the qualitative data from social media and reviews a sample of recent publicly available images of outdoor environment taken on Instagram during a period of one calendar year in 2017-2018.

Location-based social media data contains information about human activities and interactions with the urban environment (Cerrone, 2015). Visual data is particularly interesting since it provides insights into subjective experiences of people, including the ones of nature. Images from Flickr and Instagram can help identify scenic landscapes (Seresinhe, Moat & Preis, 2018), locate the built forms associated with happiness (Pringle & Guaralda, 2018), and support location analysis (Dunkel, 2015). But their content is rarely assessed from a more qualitative perspective, which is often incompatible with the large sample of the data from social media. Because this article analyses images from a relatively small area, it is possible to look at the qualitative aspects of the dataset.

Content analysis of the images revealed several distinct overlapping clusters where nature was strongly present. However, the way in which people represented nature on Instagram was predominantly scenic. Passive observation where the natural settings serve as a picture-like source of aesthetic experience dominated the dataset. The article argues that it can be either a consequence of the platform itself, as Instagram is a social network for sharing a specific kind of images, or a consequence of the spatial organisation which limits possible interactions with the environment. To reflect on these findings, the article turns to the theoretical foundations of our aesthetic experience of nature as both a scenic resource (Lothian, 1999) and a space for active engagement (Berleant, 2013; Kupfer, 2003). It suggests that the value of the natural setting in the case study rises from the contrast between the urban and the natural environment (Figure 1), and making this contrast more explicit can create a more meaningful relation between people and nature.

Images

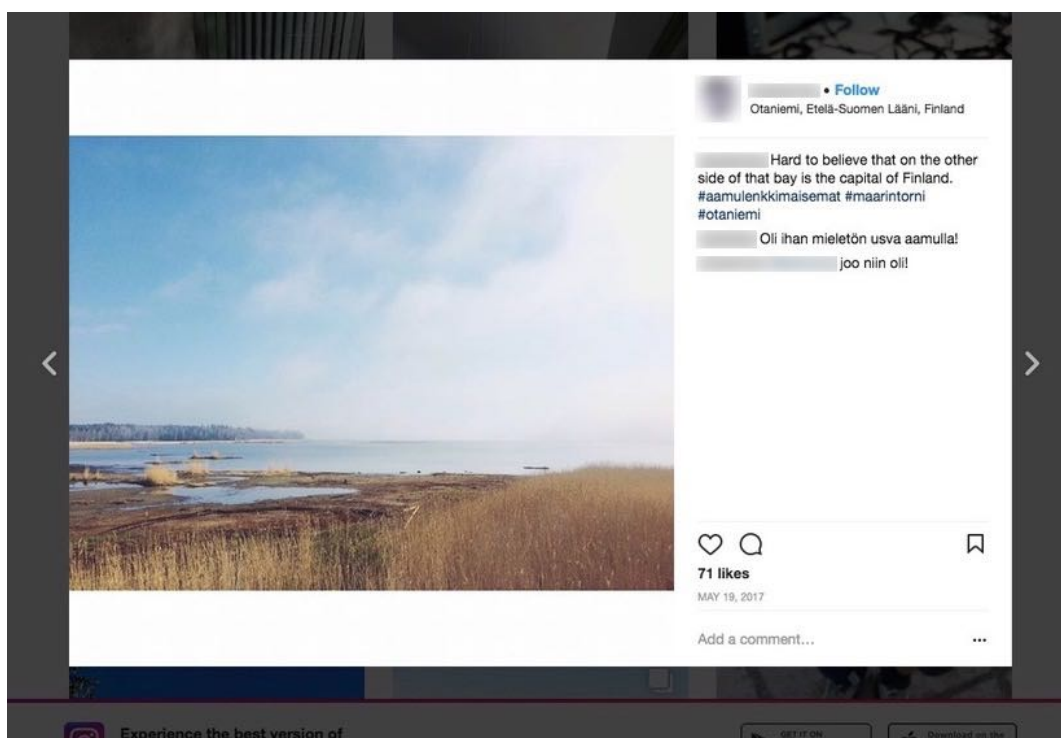


Figure 1. Screenshot of an anonymised Instagram image taken on May 19, 2017.

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Teräväinen, Helena

ORAL Presentation



Helena Teräväinen graduated in Architecture from Oulu University and has a wide working history both in the public sector including positions as Town Architect, Regional Planning Architect and Regional Artist in Architecture as well as in private architect studios. In 2006 she completed her doctoral thesis in architecture at Helsinki University of Technology, with specialization in the urban planning and design: "Old Paukku in Lapua – Re-Built and Re-Spoken. Discursive Formation of Cultural Heritage in a Case Study". Dr. Teräväinen has published several conference and journal papers in English and has had several grants from cultural foundations for writing and photographic exhibitions. Dr. Teräväinen is today working as university teacher and researcher at Aalto University, School of Arts, Design and Architecture.

The Notion Of Beauty In Architectural Discussions

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Summary

This presentation is introducing a book of architecture and architectural interviews. The book's aim is to promote the good living environment and the meaning of architecture for it. Why don't architects dare to say a building to be beautiful but it is so easy for people to call subjects in the environment ugly?

The book consists of architectural photo reportage about architecture in Seinäjoki area and interviews with architects who have either designed buildings there or have been monitoring it, writing or giving instructions. The interviews were done 2017-2018.

The work has been subsidized by Arts Promotion Centre Finland 2017.

The book's working title is "Aalto and After" and it will be published in Finnish.

Keywords: architecture, discussions, discourse, beauty, photographs

Introduction and background

The topic rose internationally and academic interesting in 2010 (among others Reisner 2010), and I've written about the subject in conference proceedings (Teräväinen 2013) and journal articles (Teräväinen 2018). In newspapers and social media the discussion is sometimes very rough, and reviews in the architectural journal are as far away from the public discussions as the scientific articles from practicing professionals. How do the architects talk about the beauty in architecture, or do they bring up the subject at all? Photo exhibition of Seinäjoki region's architecture 2012 (all pictures by the author) has been constructing background for this study.

Research Data

1) Architecture in photographs 2012-2018

The architectural photos which compose the basis for the book and this presentation were first displayed in an exhibition called "Katse tilassa" (A Gaze in the Space) and that was introducing old and new architecture in Seinäjoki and around. The exhibition was curated by a group of architects working in

municipalities at the time and funded by Arts Promotion Centre in Finland. The exhibition was first opened in Museum of South Ostrobothnia 2012 and then circulating many places in the next two years. New buildings have been photographed 2018 for the collection. Many discussions around the exhibition have demonstrated how easy the laymen declared some buildings to be ugly – and how difficult it seems to be for architects to argue for the beauty, or even say anything about it.

2) Interviews 2017-2018 – who have been interviewed

For the book I carried out nine Interviews with architects who have either designed buildings in the area or have been monitoring or writing of them. or. The interviews were made and transcribed 2017-2018 and consist of 90 pages, or 40 459 words. Among the architects were two former chief editors of the Finnish Journal of Architecture. Two interviewees are university professors – one in history of architecture and the other in architectural design. One of the interviewees had almost 40 years career as a municipal architect. One of them is very eager writer and also active in politics, but not in Southern Ostrobothnia. Four of the interviewed architects have an office, two in Seinäjoki and two elsewhere in Finland, and they are representatives of male architects in different ages.

Method and analysis

The content analysis on the transcribed material is done, and that shows really how difficult it is to use the word “beauty”, various explanations are showing up, if the concept is used at all. Some of the interviewees said it makes people think “the absolutely most beautiful” – which nobody cannot (or doesn’t want to) define. Talking about “beauty” embodies more or less “high” or “sublime”, and that doesn’t belong to present-day. In aesthetics there rose already a couple decades ago the idea of “everyday-aesthetics, and the beauty doesn’t belong there.

Some of my informants told that using “Beauty” definitely puts the actor in a difficult, light position: there soft matters for women (even though this was a male architect) and the real things (money) are elsewhere. With the other professors (history of architecture) the discussion ended up from relative beauty to experiences, which include many eras in the city scape, sensitivity to see and sense things, and the co-work between brain and hand in architectural training.

Considering public discussions about beautiful and ugly architecture also different styles were elaborated: people seem to long for old times and buildings aged enough – sometimes those are the only relics from earlier decades. But buildings from nearby past are not top-rated in the discussions: Enso-Gutzeit is admired by architects (also those generations who already have gone through the patricide of Alvar Aalto) but some people still see it ugly (for the style) and dream of the former Norrmén House on the same spot.

The other professor (actively working with museum buildings in different countries) was very sceptical with the subject: he explained the talk about tranquillity, harmony and peace be more fruitful, but also that people many ways mix up “the beauty” with other things like “feeling good”.

- and that might belong to primitive instincts or perhaps it could be something learned. And he went on speaking architecture to be more than the things we see; we also sense architecture with other senses, and people need good experiences. He explained the beauty to be something learned with tranquillity, when time has stagnated: no sharp critics, no straining. “The beauty is a tool, but I do not use the word- I rather talk about harmony, balance -, reducible – in all art as well in music and poetry as architecture – and the he repeated again how “harmony” and simplicity are the concepts he finds better than “beauty”. Also together with beauty comes always purity – and simplicity of materials, and then he gave an example of an old square in a small Sicilian town. He argued buildings not to be objects, like for example Tapio Wirkkalas artefacts, which can be beautiful. The buildings belong and must be seen in their environment, and then an unity is composed, which then is experienced beautiful.

One of the professional writer architects had an answer to my first question "Why do architects not talk about beauty" - concluding: "Architects don't want to talk about aesthetics, they think to argument in a different way and that is connected to rational culture which was rising after modernism: politicians should validate their decisions and speeches with inquiries, architects have to give reasons with functional benefits."

I'm still working with the material and doing a deeper, discourse analysis – trying to find out what kind of discourses or perhaps power relations lay back in the architects' speaking.

The (expected) results will be published (hopefully soon). I'm waiting this topic wake up discussions now, and also later on.

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**Extended Abstracts for
Session A4**

GREEN & REGIONAL

Room A215
Chair: Pia Fricker

10th Architectural Research
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ATUT 2018

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Abramovich, Xenia

ORAL&PAPER Presentation



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The Green Infrastructure in Peri-Urban Landscapes Existing studies and new insights

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Summary

The main aim of this article is to enhance the understanding of entity of green infrastructure (GI) in peri-urban conditions. The work is based on literature review and synthesis of recent European studies. This article explores in depth the main differences between urban and peri-urban GI. The study provides a detailed examination of “green” components of GI and describes the way they are functioning within urban and peri-urban conditions.

Keywords: peri-urban landscape, green infrastructure, ecosystem services, sustainable urban growth

Extended Abstract

The on-going urban expansion in Europe changed a traditional division between urban and rural areas. Following the changes, transitional peri-urban landscapes became a new place for living, commuting, recreation and working (Ravetz, Fertner, Sick Nielsen, 2013.) From the environmental, social and spatial perspective, the peri-urban landscape is the site of the most dynamic changes and can have both the urban and rural values and challenges. The peri-urban area in Europe is growing rapidly, according to the recent studies (PLUREL 2011) it has already the same amount of built-up land as urban areas, but is only half as densely populated. Moreover, some areas in Europe almost lost their urban-rural interface and consist mainly on urban-“peri-urban” continuum (Caruso, 2001). Such dramatic land transformations affect the environmental, spatial and landscape quality, decrease the function of Ecosystem services (ES) and reduces the overall livability of the urban-“peri-urban” surface (Laforteza, Davies, Sanesi, Konijnendijk, 2013). In this context, some recent studies regard GI as a tool to plan more sustainable urban growth. “GI will allow for more sophisticated and dynamic understandings of such spaces and to enable the identification and quantification of formerly underappreciated assets of the urban fringe, including newly identified economic benefits” (Thomas&Littlewood, 2010). Furthermore, some studies re-thinking the Green Belt solutions for managing peri-urban areas and embedding the GI strategy instead. “Green Belt is not a mechanism designed for the fringe. Rather, it is a means of diverting development pressure away from the edge of built-up areas, promoting urban regeneration and protecting ‘open’ countryside from sprawl” (Gallent et al., 2006, in Gallent&Shaw, 2007).

The GI concept is widely adopted by European Union, however there are still some gaps in understanding the difference between urban GI and peri-urban GI. For example, the recent GI research is produced by European Environmental Agency (EEA 2017b) and mainly focuses on UGI (Urban Green Infrastructure) typologies. Furthermore, it is not clear how to use the GI strategy in urban-“peri-urban” growth and how to manage the already existing peri-urban areas. This article is a first step in a formation of sustainable approach for European peri-urban landscapes by using the GI as a planning strategy. The main objective of the article is to clarify what is GI in peri-urban conditions; specifically, author aims to figure out how the peri-urban GI is different from urban GI. The work is based on literature review of existing studies about GI and peri-urban landscapes in general and GI in peri-urban landscapes in particular. The article consists of three parts, each of them studies the peri-urban GI from different perspectives.

The first part starts from introduction to common terminology based on recent studies about GI concept and peri-urban landscapes. Then author describes the differences between urban and peri-urban conditions by studying both their tangible and intangible features. For instance, author compares the land use pattern, the spatial form, planning and management processes, the economical profits, socio-cultural values, landscape and environmental importance.

In the second part the study explores main differences between urban and peri-urban GI. According to recent studies (EEA 2011; EEA 2017a), the peri-urban landscape in Europe usually consists from a greater amount of green open spaces than urban areas. However, the quantity of green open spaces doesn't necessarily mean that the peri-urban GI is in a different state than urban GI. The study introduces the “green” components of GI and examines if there is a specific type of green open spaces for peri-urban landscapes. By the end of this part the author considers that the main difference between peri-urban and urban GI is not only in another kind of green spaces. The crucial distinction lays in the way those green spaces are interacting with surroundings.

The third part explores how the “green” components of GI are functioning in urban and peri-urban areas. The article observes “green” components through different tangible and intangible features of urban and peri-urban conditions, which were presented in the first part. By the end, author provides tables of comparison that explain the role of various “green” components in urban and peri-urban contexts.

To conclude, this article is based on the literature review of recent European studies and aims to clarify what is Green Infrastructure in peri-urban landscapes. In particular author examines the main differences between urban and peri-urban GI. The article has three parts each of them explores the various aspects of GI in peri-urban conditions and produces several results. The first part provides an overview of recent studies about GI in peri-urban landscapes. Also this chapter explains the main differences between urban and peri-urban conditions, by comparing their spatial, planning, economical, socio-cultural and environmental features. The second part systemises the “green” components of GI and compares their differences in urban and peri-urban landscapes. The third part is a combination of the produced materials from previous chapters. In this final part, author defines the role of “green” components in urban and peri-urban contexts, by using the characteristics of urban and peri-urban areas from the first part. The main contribution of the whole study can be regarded as a formation of a conceptual framework for peri-urban GI that might serve for further work with real peri-urban condition.

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Bourgeau, Felix & Galan, Juan

ORAL&PAPER Presentation



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Vernacular Landscapes, Toward A Conceptual And Contextual Definition

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Summary

In this paper, the authors explore the vernacular landscape concept in Europe in the XXlst century in order to identify its potential role in contemporary landscape design and planning. Methodologically, this exploration is developed through a systematic study of the semantic evolution of the “vernacular landscape” concept in relation to other highly related concepts and through the incorporation of new dimensions or approaches to the vernacular phenomena provided by social and landscape sciences. As a conclusion, a potential definition for the vernacular landscape concept is proposed.

Keywords: vernacular landscape, ordinary landscape, everyday landscape, landscape production

Introduction and research questions

Vernacular landscape has mainly been theorized and studied in the late XXth century in America. In recent days, there is an apparent lack of literature link to the topic in a XXlst century European context. This research paper tends to answer the following questions: what is the meaning of vernacular landscape in our society? How can we define the vernacular dimension of the landscape? How and where do they emerge in our globalized societies?

Method

This paper is based on a literature review organized by theme followed by an exploration of new agendas affecting the landscape. Firstly, the authors analyze the etymology and semantic evolution of the words “vernacular” and “landscape” independently. This provides a first understanding of the concept and identifies other highly related concepts that are studied in more detail in the second phase of the research

in order to detect possible overlaps and complementarities. Finally, the research introduces new agendas, approaches and frameworks affecting the generation and understanding of the vernacular phenomena as provided by a wide range of disciplines and by the personal interpretation of the authors.

Results

The word “**vernacular**” originated from the Latin “vernaculus” which refers to the domestic, native and indigenous. Until the XIXth century, vernacular is an adjective defining the local language of a particular area, often describing a native written or spoken language. There are some traces in Roman time of “vernaculum” depicting homebred, homespun, homemade artifact as opposed as any merchandize (Illich, 1980, Correia 2014). Since the XIXth century, it is often used to describe a certain local, ordinary, traditional type of architecture built and used by the same people, using their own culture, ancestral knowledge, local resources and through a process including the progressive detection of mistakes and generation of improvements, therefore it is usually custom made and site specific. (Rudofsky 1964, Oliver 1997, Correia 2014)

Therefore, the vernacular can be understood as an attribute highly linked to the ordinary – out of common sense -, culturally specific, anchor to a place and to its climate, geography, economy related to this specific area.

The word “**landscape**” is still understood by many as a representation of a piece of earth, as a scenery. This is supported by several definitions found in dictionaries. The XXth century human geographers and anthropologists such as Sauer, Hirsh, Jackson brought other understandings of the word and gave a cultural dimension to the concept. We can find in the literature deeper analysis of the etymology of the word that unveils the cultural, or the man modified character imbedded in the word itself. (Jackson 1984) Following and broadening this idea, “landscape” is understood today by many scholars and practitioners in Europe as *“an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”* (European Landscape Convention, 2000).

According to this definition of the landscape, the “vernacular landscape” could be understood as the result of a specific type of interaction between culture and place [fig.1].

As displayed in table 1, the etymological study of the “landscape” and “vernacular” concepts revealed an intense connection with the cultural landscape concept, suggesting that the vernacular dimension of the landscape could be a particular expression of its cultural dimension.

Moreover, according to the definitions of cultural landscape given by the World Heritage Convention (WHC) in 1992 [table2], it could be concluded that the vernacular landscape can be rooted within the organically evolved [continuing] landscapes [fig.2]. Nevertheless, the concept of ‘cultural landscape’ seems to be considerably broader (Roe 2014) to the point that it includes any type of human intervened landscape and embraces the antagonist concept of ‘vernacular landscape’: the ‘political landscape’, understood as the landscape planned and designed to be visible and represent the order often following a top-down process (Jackson 1984).

The extensive literature on “vernacular architecture” and the key role that architecture plays in the configuration and transformation of the (cultural) landscape, makes pertinent a specific study of this concept. Thus, adjectives such as spontaneous, indigenous, anonymous, ordinary, traditional, are often used to define a specific type of architecture and to understand how the vernacular happens (Rudofsky 1964, Oliver 1997, Frey 2013). Moreover, the most recent literature claims the sustainable, adaptive and resilient quality of “vernacular architecture” (Correia 2014) providing at the same time new arguments and reasons for further research.

Interestingly, whereas architecture deals mainly and mostly with concrete elements, landscape (ELC, 2000) deals with processes and with systems in constant transformation. Therefore, and borrowing from the architectural definition, the vernacular dimension of the landscape could be linked to spontaneous, anonymous, indigenous and traditional practices and processes supporting its organic evolution by adaptation to everyday constraints.

Finally, the exploration of current landscape agendas in planning and design reveals a deep interconnection with the ecological, socio-cultural and economic dimension of the landscape as well as with its role as transversal socio-ecological platform.

Following this reasoning, the paper analyses the vernacular landscape from the following perspectives. Firstly and from an economic point of view, the vernacular could be related with a particular type of production-consumption pattern and with a specific type of connection between producers and users. In this case, one of the key current issues would be to understand how the vernacular takes place in industrial and post-industrial societies and how it can be positioned in the dialectics between mass-production systems and emerging circular economies. Secondly, the vernacular can be interpreted in terms of power and political relations (Jackson 1980). This approach brings to the discussion the connection of the vernacular with the unplanned or unregulated and with its generation in bottom-up processes (also described in the literature with other related concepts such as spontaneous and ordinary). Interestingly, this political or power reflection can be linked to questions about new models of governance and how they might affect the presence of the vernacular in the landscape. Thirdly and from a cultural and geographical perspective, the vernacular might provide a useful lens to better understand ongoing processes of globalization and standardization, in opposition to site-based and individual or group-based solutions.

If a farmer building a stonewall on his own field is an example of a vernacular intervention in the landscape, the street artist marking his territory and collective identity with local patterns and colors would also have a vernacular character in the transformation of urban landscape (Krase 2011).

Discussion & conclusion

The integration of the results has generated an extensive list of complementary qualities that can be associated to the “vernacular dimension of the landscape” and has raised new questions about the meaning and conditions in which the vernacular might occur now and its potential linkage to sustainability and governance agendas. In addition, the results suggest the existence of direct links between the vernacular dimension of the landscape and the economic, political and socio-cultural drivers affecting landscape transformation and management.

According to the developed research, the vernacular might be understood as one dimension of every landscape emerging from the bottom-up interaction of a specific culture with its local natural environment. This dimension would evolve organically through adaptation to climate or geographical constraints and societal changes and would be based in the collective, unplanned and undirected intervention of people in the transformation and management of the landscape, of its elements and patterns.

This potential definition helps to grasp the essence of the concept and places it in our society but, at the same time, rises essential questions needing further research. In particular the boundaries between the vernacular and non-vernacular seems to be diffused and respond more to quantitative gradients than to qualitative limits. In addition and in spite of the apparent connection between sustainability, resilience and vernacularity, the relevance and convenience of supporting a vernacular approach to the landscape needs to be properly justified. Finally, if the generation of the vernacular is based in an unplanned and bottom-up process, the mere participation of planners and designers could be seen as a conceptual contradiction.

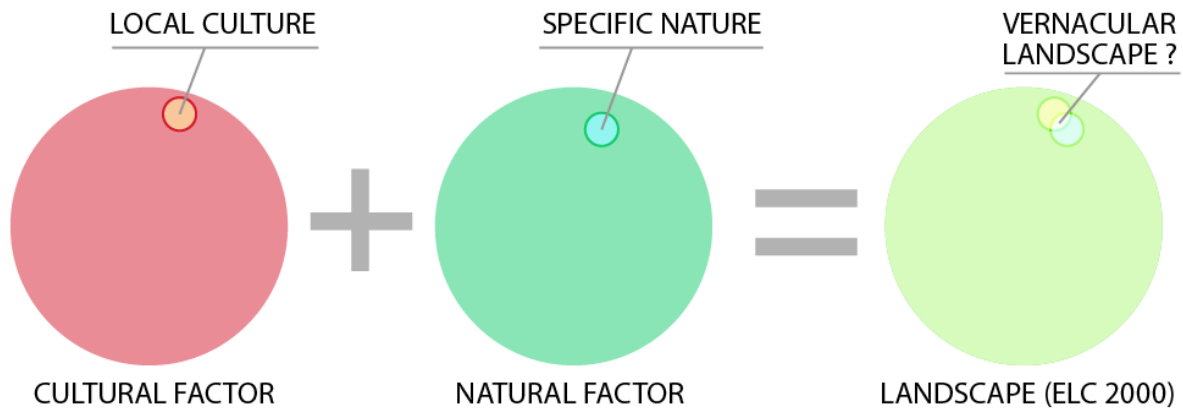
List of images

	Author	Definition	opposed to	date
VL1	The cultural landscape foundation:	"A Vernacular Landscape is a cultural landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives."	consumption landscape, tourist landscape, exceptional, unique landscape	
VL2	The dictionary of Human geography - Noel Castree and al.	"A landscape that reflects the occupancy, culture, and activities of the people who live there and their ancestors. It is sometimes considered an authentic landscape in that it contains localized forms of architecture, land division, and use, and shows how people live their everyday lives, in contrast to more homogeneous, globalized forms of modernist architecture and planning that have the same look and feel."	opposed to globalized and homogenized patterns	2013
VL3	Discovering the Vernacular Landscape – J.B. Jackson	"its spaces are usually small, irregular in shape, subject to rapid change in use, in ownership, in dimensions; that the houses, even the villages themselves, grow, shrink, change morphology, change location; that there is always a vast amount of "common land" - waste, pasturage, forest, areas where the natural resources are exploited in a piecemeal manner; that its roads are little more than paths and lanes, never maintained and rarely permanent; finally that the vernacular landscape is a scattering of hamlets and clusters of fields, islands in a sea of waste or wilderness changing from generation to generation, leaving no monuments, only abandonment or signs of renewal."	opposed to monumental, lasting, visible political landscapes	1984
VL4	Charles A. Birnbaum, ASLA	"Historic Vernacular Landscape - a landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives. Function plays a significant role in vernacular landscapes. They can be a single property such as a farm or a collection of properties such as a district of historic farms along a river valley. Examples include rural villages, industrial complexes, and agricultural landscapes."	opposed to spontaneous, pop-up landscape, and to contemplative landscape	1994

[table1]. Available 'vernacular landscape' definitions in the literature

	Author	Definition	date
CL1	World heritage convention	"The most easily identifiable is the clearly defined landscape designed and created intentionally by man. This embraces garden and parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles."	1992
CL2.1		"The second category is the organically evolved landscape . This results from an initial social, economic, administrative, and/or religious imperative and has developed its present form by association with and in response to its natural environment. Such landscapes reflect that process of evolution in their form and component features. They fall into two sub-categories:	
CL2.2		- a relict (or fossil) landscape is one in which an evolutionary process came to an end at some time in the past, either abruptly or over a period. Its significant distinguishing features are, however, still visible in material form.	
CL3		- a continuing landscape is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time it exhibits significant material evidence of its evolution over time."	
		"the final category is the associative cultural landscape . The inclusion of such landscapes on the World Heritage List is justifiable by virtue of the powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent."	

[table2]. Three categories of cultural landscape from the World Heritage Convention (UNESCO, 2009)



[fig.1] – Vernacular landscape within the ELC definition



[fig.2] – organically evolved [continuing] landscapes could be equivalent to the vernacular landscape

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Hautamäki, Ranja

ORAL&PAPER Presentation



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Construction of Urban Green in the Compact City Discourse of Helsinki City Plan

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Summary

The paper addresses the paradigm shift in green planning, focusing on Helsinki City Plan, approved in 2016. The current emphasis on compact city policies leads to redefining and reshaping the urban green. Examples of these new priorities are objectives accentuating coherent city instead of interconnected green structure, the quality of green areas rather than their quantity, development instead of preservation and urban character versus nature-based values. The study discusses with two case studies how green structure is constructed and modified to fit in with the compact city policies and fulfil the priorities of densification.

Keywords: green structure, compact city, Helsinki City Plan, paradigm shift

Extended Abstract

Green areas and their multiple values are widely recognised, but they are simultaneously contested by accelerating urbanisation. The current emphasis on compact city policies leads to redefining and reshaping the urban green. Examples of these new priorities are objectives accentuating coherent city instead of interconnected green structure, the quality of green areas rather than their quantity, development instead of preservation and urban character versus nature-based values. This paper addresses the detected paradigm shift in green planning, focusing on Helsinki City Plan, approved in 2016. It examines the central green zones, so called *green fingers* and presents two case studies for deeper analysis: the infill development plan of Central Park and the infill project of Tuomarinkylä manor landscape in Helsinki Park. The reason for selecting these areas was that they represent the most conflicting and debated cases which included infill construction in valuable green areas and active citizen movements protesting the plans.

Helsinki is rapidly expanding, as are many other metropolitan areas. The fundamental principle of future land use is the densification of urban structure, as outlined in the Helsinki City Plan. A third of the planned building volume is infill construction, including building on a remarkable amount of green areas. The principle differs dramatically from the previous comprehensive plan of 2002 which emphasized coherent green structure and historical landscapes. This paper examines the transforming role of green structure and compares the conceptualization of urban green in the master plan 2016 with the previous comprehensive planning documents. It reveals how green planning principles have been reshaped to coincide with the densification policy and what values and priorities are embedded in the negotiations regarding green structure and urban planning. The study applies narrative analysis and examines how urban green is constructed in the compact city

discourse. The research data consists of planning documents and discussions related to the comprehensive plan and two case studies. As a background, an analysis of the evolution of green zones in Helsinki and the historical development of green structure planning were reviewed, including the previous comprehensive plans from the years 1960, 1970, 1992 and 2002.

The analysis of Helsinki City Plan demonstrates that the construction of urban green is deeply connected with the urban planning agenda and its political interests. Even if compact city policies strive to promote green infrastructure, the tension between growth and green structure is apparent. The status of green structure and its planning principles are undergoing a transition. Comparing Helsinki City Plan with the earlier green planning strategies identified several differences in design principles which can be interpreted as a paradigm shift. While the comprehensive plans 1992 and 2002 highlighted coherent green structure and green fingers as a planning priority, the new plan emphasizes compact city and urban green with focus on quality, instead of quantity. Furthermore, the previous comprehensive plans accentuated cultural environments and historical landscapes, whereas Helsinki City Plan regards preservation as problematic, limiting growth. The study reveals that green structure is conceptualized and modified to fit in with the compact city policies and fulfil the priorities of densification. The paper contributes to the topical discussion on the opposition and interdependence of green and urban structures. It calls for a more critical examination of compact city policies and a deeper understanding on green structure and its myriad roles in sustainable and liveable cities.

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**Extended Abstracts
for Session B2**

**SUSTAINABILITY
&TIMBER**

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10th Architectural Research
Symposium in Finland

ATUT 2018

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Becker, Edward

ORAL&PAPER Presentation



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Completing the Cycle: An alignment of open-source digital technologies and the distributed manufacturing of advanced biomaterials

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Summary

This research focuses on cross laminated timber (CLT), an 'advanced' biomaterial, and explores how two emerging trends in biomaterial utilization - open-source digital technologies and distributed manufacturing - may positively and negatively impact its architectural utilization. The author draws from the fields of architecture, sustainable biomaterials, construction, and digital technologies using first-hand information from professional practice, case-study projects, cross-disciplinary interviews with professionals, and historic precedents to contextualize the research. Through the lens of two case-study projects, the research questions what positive outcomes can come from such an alignment and how potentially negative impacts can be mitigated.

Keywords: Practice-based research, digital technology, biomaterials, cross-laminated timber

Introduction

'Completing the cycle' describes a cyclical process whereby locally-sourced biomaterials are upcycled into high performance building products while in turn helping to improve the economic position of rural economies and reducing carbon emissions from construction. Biomaterials can be termed 'advanced' once they have been upcycled, meaning they have been altered in some manner to improve performance and value. Upcycling can be achieved by many different processes and can enhance a wide array of bio-based materials. As new technologies spur novel methods of biomaterial advancement via upcycling, architects would be wise to consider what opportunities this may afford to advance the built environment from both performance-based and affective positions.

This research focuses on one particular advanced biomaterial, cross-laminated timber (CLT), and how two emerging trends in biomaterial utilization - open-source digital technologies and distributed manufacturing - may positively and negatively impact its architectural utilization. While open-source digital technologies such as open-source machining data hold the potential to increase the dissemination of high-level performance information for non-expert production, open-source technologies also hold legal risks with data so easily accessible. Additionally, the distributed manufacturing of advanced biomaterials also has its clear advantages and

disadvantages. By increasing the amount of production facilities for advanced biomaterials such as CLT, the 'cycle can be completed' in a greater number of areas than can currently occur due to a limited number of CLT manufacturers. On the other hand, by creating distributed manufacturing networks for CLT, quality control becomes a primary concern with legal and safety implications. As the emerging trends of open-source data and distributed manufacturing impact design and production with the advanced biomaterial CLT, how can the positive outcomes of such an alignment be capitalized upon while negative outcomes are mitigated? The author will explore this question via two case study projects and a cross comparison between the Finnish and North American contexts.

Methods

The paper draws from the fields of architecture, sustainable biomaterials, construction, and digital technologies to compare and contrast the architectural design and construction contexts of Finland and North America relative to the implementation of open-source technologies and the distributed

manufacturing of biomaterials. The author uses first-hand information from professional practice, case-study projects, cross-disciplinary interviews with professionals, and historic precedents to contextualize the research. The two emerging trends whose alignment is of particular focus - open-source digital technologies and distributed manufacturing - are included in the paper due to a general lack of research relative to their impact on the built environment, as well as the potential for their alignment to spur innovative design and production practices. Ultimately, such an alignment could alter the manner by which architects think about production and material utilization, thereby impacting the way architects approach building design and construction.

The first case-study to be introduced is a train observation tower in the United States built from prefabricated, hardwood CLT modules. The design-build project by Virginia Tech is constructed from locally-sourced Tulip Poplar hardwood using a unique method of panel fabrication and testing. The project is both entrepreneurial and experimental. The project's design, assembly methodology, and production process will be analyzed relative to the context of mass timber construction in North America and Finland.

The second case-study project is a Timber SmartWall under development at Virginia Tech. The SmartWall uses open-source fabrication data and accessible milling technologies to optimize timber panels for enhanced performance. The project is being developed for use in two residential projects being designed by the author. Questions of performance enhancement, data risk, and biomaterial utilization are explored through the work.

Context and Value of Practice-Based Research:

Each case-study project is reliant on the ability to conduct practice-based research from within a university setting. A practice-based process has been critical to the rapid deployment of material and procedural innovations through the direct linking of academic research to actual construction. Through this process, an important disciplinary gap has been filled: the expedited implementation of biomaterial research into professional practice. Such adoption is important to the discipline because it allows resulting outcomes from real-world tests to be analyzed and reincorporated into further academic research, thus promoting the iterative, cyclical process of innovation. Considering the environmental benefits of using renewable biomaterials over established non-renewables, particularly in an age of such climate concern and urgency, the implementation of biomaterial innovation in the built environment is becoming increasingly relevant to the

architecture, engineering, and construction industries, as well as society at large.

Results / Analysis

Finnish and North American contexts have differing manufacturing capabilities and distribution network efficiencies. As such, open-source technologies and distributed manufacturing hold differing advantages over traditional production in each context. The paper will explain context-specific advantages and disadvantages in detail as well as propose future paths for study.

Discussion

The research is timely due to the rapid growth of CLT production and utilization in North America and a changing landscape of CLT manufacturing in Finland. Emerging technologies offer benefits in both locations, yet the current impact of such open-source technologies is nascent. If architects follow the lead of other professions in adopting open-source technologies for non-expert production and networked manufacturing, how will this impact the utilization of CLT and other biomaterials, and ultimately how will this alter the design of architectural space?



List of Images:

Radford Train Observation Tower: Credit, Virginia Tech - School of Architecture + Design

Material Upcycling: Credit, Virginia Tech - School of Architecture + Design

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ORAL&PAPER Presentation



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A study of the frame designs of Finnish timber residential apartment buildings and forms of ownership of apartments

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Summary

In all, 65 over-two-story timber residential apartment buildings comprising 1673 apartments have been constructed in Finland as of October 2018. Tampere University of Technology's (TUT) School of Architecture has conducted a "Competitiveness of Timber Apartment Buildings" study investigating the frame design of all the timber residential apartment buildings constructed in Finland as well as the form of ownership of the apartments in each building. The frame designs used in Finnish timber apartment buildings are platform frames (62 %), modular element designs based on CLT technology (21 %), veneer pillar-beam-ribbed slab frames (12 %) and CLT based slab elements (5 %). Based on the study, CLT and LVL modular elements are becoming the most common designs in new timber apartment buildings. Timber-concrete composite slab structures are most commonly used in the intermediate floors due to their good sound insulation. The timber apartment buildings constructed in Finland contain rental (43 %), privately owned (38 %), right-of-residence (17 %), and semi-privately owned (2 %) apartments.

Keywords: *timber construction, timber apartment buildings, modular element, CLT, LVL*

1. Background

1.1. Timber construction as a part of the forest industry

The forestry sector is a very important part of Finland's national economy. Finland's forests grow nearly 110 million m³ of stem wood per year, of which about 60–65 % has been utilized in recent years. Sustainable use of wood could be increased significantly (by approx. 20 mill. m³/yr), e.g. as a source of bioenergy and in construction, the wood product industry, and various processed bioproducts. Approximately four-fifths of Finland's sawn timber is used in construction, where housing construction plays a major role: about 65 % of Finland's building stock is comprised of residential buildings. The greatest growth potential in Finland's timber construction lies in apartment buildings, public buildings, hall-type buildings, bridges, yard and

milieu structures, as well as energy renovations of suburban apartment building façades, construction of additional floors, and infill construction.

1.2. Timber construction as a part of preventing climate change

Timber construction is ecological. While growing, one cubic meter of wood binds one ton of carbon dioxide from the air and simultaneously releases 700 kg of oxygen into the atmosphere through photosynthesis. Half of wood's dry weight consists of carbon. Growing forests are carbon sinks and timber wood products are carbon stores. Ever greater possibilities are opening for timber construction, as the significance of worldwide climate, environmental, and natural resource issues grows. Ecological, low-carbon, renewable resources and raw materials should be increasingly promoted globally. Timber construction is an important part of the bioeconomy and one of the forerunning projects of Prime Minister Juha Sipilä's government. The forest sector accounts for over half of the value of Finland's bioeconomy. The goal of Finland's Ministry of the Environment is to take the carbon footprint of buildings into consideration in building regulations by the mid-2020s. It is apparent that in this respect wood—a domestic, local, renewable, and environmentally friendly energy source and construction material—will become an increasingly desirable raw material.

2. Timber apartment building construction in Finland

2.1. Development cycle and market potential of timber apartment buildings

Timber apartment building construction was started in Finland with a brief experimental construction phase in the mid-1990s. After three pilot timber apartment buildings (Ylöjärvi, Helsinki, Oulu), Finland's fire code (RakMK E1) was revised 1.9.1997 to allow residential and workplace buildings with wood frames and façades up to four stories high (= timber apartment buildings). Finland's fire code was revised again 15.4.2011, after which the tabular specifications of the fire code allowed construction of timber apartment buildings up to eight stories high. The fire code was revised again 1.1.2018 (Ministry of the Environment statute 848/2017 concerning building fire safety). Thereafter it has been possible to design and build residential and workplace buildings as well as lodging and institutional buildings with wood frames and façades up to eight stories high. It is also possible to build timber apartment buildings over eight stories high based on analysis of functional fire design. [1]

In Europe, Finland is second only to Spain in the proportion of apartment buildings; around 46 % of Finland's housing units are in apartment buildings. Still today, of all new housing units built annually (approx. 30,000–40,000 units / year), over half are in apartment buildings. [2] To date, 65 timber apartment buildings over two stories high have been built in Finland, comprising 1673 apartments. New timber apartment buildings containing about 1300 apartments will be built in the next few years. In addition, plans for new timber residential apartment buildings containing around 6000 apartments are on the table all over Finland.

2.2. Frame systems of timber apartment buildings

There are several different types of frame systems available for timber apartment building construction, for which there is a sufficient amount of wood element production plants and manufacturing capacity in Finland. Most of Finland's earliest residential apartment buildings were built using the American platform-frame system. This construction method is based on floor-by-floor stud frame construction. In this method the frame is usually made from precut timber either by building one floor at a time on-site or by utilizing prefabricated elements in different stages of completion (small or large elements). Today large elements are very commonly used in timber apartment buildings. Laminated wood is also used in stud frames. Various types of mixed frame systems are also possible. Typically, the load-bearing structures in all timber apartment building systems have rather short spans (4.5–8 meters). Finnish timber apartment buildings generally have wood façades, but other façade designs are also possible.

In recent years CLT (Cross Laminated Timber) technology, in particular, has become very common in Finnish timber apartment building construction; the building's vertical and horizontal elements are formed from massive timber sheets made of crossed layers of boards that are glued together. The CLT system in Finland was originally robustly developed by StoraEnso, which also started its own LVL (Laminated Veneer Lumber) massive timber sheet production in Varkaus in 2016. LVL sheets can be used similarly to CLT sheets in a building's frame construction. Due to their simple joint technique, airtightness, and frame rigidity and minimal settling, CLT and LVL are competitive especially as large elements in tall timber apartment buildings. Domestic CLT production began at the CrossLam plant in Kuhmo in December 2014. CLT production is also running in Alajärvi (CLT Finland Oy, Hoisko) and a CLT-Plant is starting up in Kauhajoki.

Modular element technology based on CLT and LVL frames has very rapidly become common in Finnish timber apartment building construction. Modular element construction using dry, lightweight, largely prefabricated elements is a rapid construction method that shortens construction time at the building site and thereby lowers overall costs. Due to the limitations of road transport, the most common modular element sizes are: 4.5 (width) x 3.0 (height) x 13.5 (length). Swedish Lindsbäck Bygg is also entering the Finnish modular element construction market; its timber apartment building production is based on stud frame modular elements [3]. A few timber apartment buildings with a pillar-beam-ribbed slab system based on LVL technology have also been constructed in Finland. The system concept is quite advanced and its most competitive area is in 3–4-story timber residential apartment buildings and office buildings. Laminated wood is also suitable for beam-pillar frames.

3. Competitiveness of Timber Apartment Buildings study 2018; results

Tampere University of Technology's (TUT) School of Architecture conducted a "Competitiveness of Timber Apartment Buildings" study that investigated the number of floors, size, frame design, and form of ownership of the apartments in the timber apartment buildings constructed in Finland as of October 2018. This information has been compiled as a statistical summary and comparison in the annex table (**Table 1**). The timber apartment buildings constructed in Finland so far contain an average of 26 apartments (= 1673 / 65). The most common height is 3–4 stories (82 %). The frame designs used are platform frames (62 %), modular element designs based on CLT technology (21 %), veneer pillar-beam-ribbed slab frames (12 %), and CLT based slab elements (5 %). Based on the study, CLT and LVL modular elements are becoming the most common designs in new timber apartment buildings. Since the beginning of 2018 Finland's fire code has allowed freer use of wood as the visible facing material of indoor surfaces. This appears to favor CLT designs, where massive wood surfaces can be left visible on indoor surfaces. Timber-concrete composite slab structures are most commonly used in the intermediate floors due to their good sound insulation. The timber apartment buildings constructed in Finland contain rental (43 %), privately owned (38 %), right-of-residence (17 %), and semi-privately owned (2 %) apartments.

References

- [1] Ministry of the Environment statute 848/2017 on building fire safety.
- [2] Statistics Finland.
- [3] Suomen Puukerrostalot Oy, Managing director Teppo Laurila.

Table 1.

<u>Site (year):</u>	<u>Buildings / Floors:</u>	<u>Housing units:</u>	<u>Size (k-m²):</u>	<u>Frame:</u>	<u>Form of ownership:</u>
1. Ylöjärvi (1996)	3 / 2 – 3	19	1 465	Pilari-palkki-runko	Vuokra-asuntoja
2. Helsinki, Viikinmansio (1997)	7 / 2 – 4	65	5 883	Platform-rankarunko	Vuokra-asuntoja
3. Oulu, Puukotka (1997)	3 / 3 33	2 190		Platform-rankarunko	Vuokra-asuntoja

4. Tuusula, Hyrylä (1997)	2 / 4	46	3 622	Platform-rankarunko	Vuokra-asuntoja 23 Asumisoikeusasuntoja 23
5. Raisio (1997)	3 / 4	42	2 550	Platform-rankarunko	Vuokra-asuntoja 14 Asumisoikeusasuntoja 14 Osaomistusasuntoja 14
6. Porvoo, Fredrika (1998)	1 / 2 – 3	19	1 371	Platform-rankarunko	Omistusasuntoja
7. Porvoo, Aleksanterinkatu (1999)	1 / 4	24	2 498	Platform-rankarunko	Omistusasuntoja
8. Naantali (2000)	3 / 4	51	4 080	Platform-rankarunko	Asumisoikeusasuntoja 17 Osaomistusasuntoja 17 Omistusasuntoja 17
9. Oulu, Puu-Linnanmaa (2002)	1 / 3	14	994	Platform-rankarunko	Omistusasuntoja
10. Lahti, Puu-Paavola (1998 – 2003)	4 / 4	74	7 300	Platform-rankarunko	Omistusasuntoja
11. Helsinki, Omenmäki (2006)	3 / 3 – 4	131	12 165	Platform-rankarunko	Vuokra-asuntoja
12. Heinola, Puumera (2011)	1 / 5	27	1 915	Platform-rankarunko	Omistusasuntoja
13. Helsinki, Viikin Latokartano (2012)	5 / 3 – 4	104	6 300	Pilari-palkki-runko	Omistusasuntoja
14. Seinäjoki, Lintuviita (2013)	1 / 6	50	3 100	CLT-tilaelementti	Omistusasuntoja
15. Turku, KOY Turun Palvelukoti (2014)	1 / 4	54	3 000	CLT-tilaelementti	Vuokra-asuntoja
16. Jyväskylä, Puukuokka 1 (2014)	1 / 8	58	4 155	CLT-tilaelementti	Omistusasuntoja
17. Saarijärvi, Omatoimi (2015)	1 / 4	24	1 905	CLT-tilaelementti	Asumisoikeusasuntoja
18. Helsinki, Pukinmäki (2015)	4 / 5 – 7	93	7 700	CLT-tilaelementti	Vuokra-asuntoja 51 Asumisoikeusasuntoja 42
19. Ii, Kirjala (2015)	1 / 4	15	1 200	Platform-rankarunko	Omistusasuntoja
20. Vantaa, Kivistö, Puumera (2015)	1 / 7	186	11 800	Platform-rankarunko	Vuokra-asuntoja 79 Asumisoikeusasuntoja 107
21. Seinäjoki, Mäihä (2016)	1 / 5	28	1 837	CLT-tilaelementti	Omistusasuntoja
22. Imatra (2016)	1 / 3	13	963	Platform-rankarunko	Omistusasuntoja
23. Kajaani, Rajamiehentie (2016)	1 / 3 – 4	15	1 200	CLT-tasoelementti	Vuokra-asuntoja
24. Helsinki, Honkasuo (2016 – 2017)	2 / 4	116	7 524	Platform-rankarunko	Vuokra-asuntoja 58 Asumisoikeusasuntoja 58
25. Tampere, Vuores, Koukkuranta (2017)	2 / 4	53	3 200	CLT-tilaelementti	Vuokra-asuntoja
26. Joensuu, Pihapetäjä (2017)	1 / 6	40	2 100	CLT-tilaelementti	Vuokra-asuntoja
27. Helsinki, Honkasuo, Sikla (2017)	4 / 3	43	3 200	Platform-rankarunko	Omistusasuntoja
28. Jyväskylä, Puukuokka 2 (2017)	1 / 7	70	3 673	CLT-tilaelementti	Omistusasuntoja

29. Helsinki, Kuninkaantammi (2018)	2 / 4	58	3 115	Platform-rankarunko	Vuokra-asuntoja
30. Jyväskylä, Puukuokka 3 (2018)	1 / 6	58	3 256	CLT-tilaelementti	Omistusasuntoja
31. Pori, Tuomarinkulma (2018)	1 / 3	23	1 460	CLT-tasoelementti	Vuokra-asuntoja
32. Järvenpää, Puusinfonia (2018)	1 / 3	27	1 158	Platform-rankarunko	Omistusasuntoja

Yhteensä: 65 1 673

Translations:

- Platform-rankarunko = Platform frame
- CLT-tilaelementti = Modular element designs based on CLT technology
- Pilari-palkki-runko = Veneer pillar-beam frame
- CLT-tasoelementti = CLT based slab elements
- Vuokra-asuntoja = Rental apartments
- Omistusasuntoja = Private owned apartments
- Asumisoikeusasuntoja = Right-of-residence apartments
- Osaomistusasuntoja = Semi-privately owned apartments

Toiviainen, Pasi:

ORAL&PAPER Presentation



Pasi Toiviainen is an architect and a doctoral candidate at the Architectural department of Aalto University. His research interests lie in environmental history of architecture. Toiviainen is also a science journalist, author and lecturer. He has received several awards for his work in the fields of performing arts, architecture, journalism and non-fiction literature.

Emergent Urban Natures as a Turning Point for Design: a Historical Perspective

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Summary

It is broadly viewed that emergent urban natures, such as green-blue infrastructures, ecosystem services, and nature-based solutions, provide new insights for sustainable urban design. Further, their significance is often presented as nothing short of pivotal. However, in this presentation, I am to question these interpretations. My aim is to present a brief historical survey on the design ideas embedded within the newly conceived emergent urban natures. I am to argue, that their essential insights can be traced back to, at least, the 1960s. Correspondingly, the notion of the (re-)emergent urban natures as constituting a turning point appears questionable.

keywords: emergent urban natures, green-blue infrastructures, ecosystem services, nature-based solutions, sustainable urban metabolisms, sustainable design, ecological design, environmental history

Extended Abstract

Background

In the call for abstracts of the 10th Architectural Research Symposium in Finland 2018 (ATUT 2018), the emergent urban natures, such as ecosystem services, green-blue infrastructures and sustainable urban metabolisms, are described as being both novel and pivotal. This description is given as representative of accepted positions within the planning profession and it is, indeed, not without basis. For, in recent research, the management of stormwater flows by green-blue infrastructures, as opposed to grey infrastructures, is described as a “new paradigm” (Bacchin et al, 2014, p.3) and at “the cutting edge of innovation” (Perini and Sabbion, 2017, p.xiv). Likewise, the notion of sustainable urban metabolisms, i.e., material flows through cities managed according to is advocated as offering “new visions” for tackling the challenges of sustainability

As concepts, such emergent notions are no doubt fairly new. While some of them are already quite well established, others remain somewhat vague. Arguably, one of the more established concepts is ecosystem services, which refers to “the benefits people obtain from ecosystems” (Millennium Ecosystem Assessment, 2005, p.v). Contrastingly, at the other end of the spectrum lies, for instance,

nature-based solutions, or “actions inspired by, supported by or copied from nature” (European Commission, 2015, p.5). It is suggested as an umbrella concept that would sweep up practically all others similar, such as the above mentioned sustainable development goals, (Ferrão and Fernández, 2013). the suggested overarching concept of emergent urban natures which has been put forward as green spatial infrastructure mainly intended to reconnect urban dwellers to their surroundings (MAPS 2017). Another rather vague

proposition is the notion of green-blue infrastructures and ecosystem services as well as natural capital, ecological engineering, etc. (Nature, 2017; Nesshöver et al, 2017)

As the precise meanings and possible contributions of all of these new notions are still being somewhat negotiated, the introduction of nature-based solutions, in particular, has sparked a critical discussion. The concern has been expressed that perhaps this new concept is more about renaming something already existing than about actually creating anything new. (Nature, 2017; Nesshöver et al, 2017) It is in such a concern that also the impetus for this presentation lies. It is only that I am to expand the discussion to involve the above mentioned notions more generally.

Aims, methods, sources and expected results

The aim of my study is to view the described emergent urban natures – or, as also suggested, nature-based solutions – within a historical context. I am to assess, to what extent they can be seen as novelties. Most particularly, I assess the extent to which they, both individually and as a group, represent a turning point for sustainable design. To this end, it is imperative to study, not only their newly formed concepts, but also their origins. This entails a historical inquiry into the concrete design ideas and practices that they advocate.

This presentation is linked to my ongoing doctoral research in which I study the American inventor- architect Buckminster Fuller (1895–1983) as a paragon of ecological design. Since Fuller's career as a designer spanned over six decades, from the early 1920s to the early 1980s, an essential part of my research has been to lay out the historical backdrop, most particularly the 20th century developments of the ecological design movement.

My research is literature-based and it employs the historical method (Kalela, 2000). My sources consist mainly of publications pertaining to the history of ecological design. These include works such as *Man and Nature; or, Physical Geography as Modified by Human Action*, written by George Perkins Marsh in 1864, and *Design with Nature*, by Ian McHarg, in 1969. The theoretical discussion draws from the fields of ecology, systems science and others related.

In my presentation I am to argue that the insights adhered to the now emergent urban natures / nature-based solutions can be traced back in time for at least half a century, to the environmental awakening of the 1960s – and some of them for more than a century. Moreover, the notion that any of these emerging or, rather, re-emerging nature-based solutions ought, at present, to be viewed as constituting a historical turning point for design appears questionable.

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**Extended Abstracts for
Session B3**

HOUSING

Room A123
Chairs: Johanna Lilius &
Anne Tervo

10th Architectural Research
Symposium in Finland

ATUT 2018

*Global North – Global Challenges
and Local Responses
in Contemporary Architecture*

Address: Otakaari 1X, Espoo.
(nearest Metro station: Aalto University)

Maununaho, Katja

ORAL&PAPER Presentation



Katja Maununaho is an architect and researcher. Her research interests focus on the relations of spatial, functional, cultural and social factors in urban environment and on the questions of design in the context of increasing diversity in urban dwellers everyday life. She is currently working as a project researcher in Dwellers in Agile City research project and with her PhD research at the School of Architecture in Tampere University of Technology. In addition, Katja Maununaho works with user oriented housing design cases in her architectural office Arkkitehtitoimisto Huvila Oy in Helsinki.

Integroidun asumisen sosiaalisen seurallisuuden tilat

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Summary

Integroitu asuminen viittaa asumisratkaisuihin, joiden tavoitteena on erilaisten asukasryhmien sekoittunut, vuorovaikutuksellinen ja vastavuoroisia hyötyjä tuottava asuminen. Tarkastelen esityksessä korttelimittakaavassa toteutettujen integroidun asumisen kohteiden tilallis-toiminnallista rakennetta, ja etsin potentiaaleja erilaisten asukkaiden välistä vuorovaikutusta tukevan sosiaalisen seurallisuuden (conviviality) muodostumiselle tilassa. Sosiaalisen seurallisuuden tiloilta edellytetään heterogeenisyyttä, avoimuutta ja saavutettavuutta sekä joustavuutta asukkaiden erilaisiin tarpeisiin. Kysyn, millaiset tilallis-toiminnalliset ratkaisut voivat toimia sosiaalista seurallisuutta ja vuorovaikutusta mahdollistavina tekijöinä.

keywords: integroitu asuminen, sosiaalinen seurallisuus, tilallis-toiminnallinen potentiaali, Gehl

Extended abstract

Tutkimukseni käsittelee suomalaisissa kaupungeissa lisääntyvän kulttuurisen monimuotoisuuden vaikutuksia asuntosuunnittelun kentällä suunnittelua ohjaavien ajattelutapojen, suunnitteluprosessien ja niissä muodostuvien ratkaisumallien osalta. Kulttuurisen monimuotoisuuden lisääntyminen liitetään yleisimmin maahanmuuttoon, mutta todellisuudessa siihen vaikuttaa useat päällekkäiset tekijät. Tarkasteltaessa kulttuuria arkielämän käytäntöjä ohjaavana ja niille merkitystä antavana taustana, monimuotoistumiseen liittyy etnisen taustan ohella mm. elämäntapoihin, sosioekonomiseen asemaan, koulutukseen ja ikään liittyviä eroavuuksia. Esimerkiksi iäkkään lääkärin ja työttömän nuoren arjen käytännöt poikkeavat toisistaan, ja ne saavat merkityksensä erilaisten elämäntilanteiden ja sosiaalisten

verkostojen kautta muodostuneiden kulttuuristen käsitysten kautta. Keskeisenä kiinnostuksen kohteena tutkimuksessani ovat asuinympäristön tilat, jotka mahdollistavat erilaisten arjen käytäntöjen toteutumista asuinympäristössä, ja samalla voivat toimia eritaustaisten asukkaiden välisiä kohtaamisia ja vuorovaikutusta sallivana ja integraatiota tukevana rakenteena.

Integroidun asumisen konsepti on tutkimuksessa yhtenä tarkasteltavana tapauksena. Integroidun asumisen kohteissa erilaiset asukkaat asuvat rinnakkain samassa rakennuskokonaisuudessa, jonka tilavalikoimaan sisältyy yksityisten asuintilojen rinnalla erilaisia asukkaiden yhteiskäytössä olevia jaettuja tiloja. Ebnerin (2007, 11-12) mukaan keskeistä integroidussa asumisessa on tavoitella asukasryhmien sekoittamisen lisäksi ratkaisuja, joilla pyritään aktiivisesti erilaisten asukkaiden väliseen vuorovaikutukseen ja sen kautta avautuvien hyötyjen vastavuoroisuuteen asukasryhmien välillä. Integroidun asumisen käsitteen alle voi sisältyä mm. sosiaali-, ikä-, ja kulttuuriryhmien, perhemuotojen ja elämäntapojen välistä diversiteettiä.

Sosiaalinen seurallisuus toimii tutkimuksessa käsitteellisenä apuna edellä mainittuja integroidun asumisen tavoitteita mahdollistavien tilojen ominaisuuksien tarkastelussa. Seurallisuus (conviviality) on sosiaalisiin suhteisiin liittyvä ilmiö, jonka voidaan nähdä liittyvän tiettyihin paikkoihin (Radice 2016). Seuralliset paikat mahdollistavat ihmisten erilaiset lähtökohdat ylittäviä tasa-arvoisia kohtaamistilanteita, joiden merkitys kasvaa kaupunkiyhteisöjen lisääntyvän monimuotoistumisen myötä. Sosiaalinen seurallisuus tarkoittaa sopivaa ilmapiiriä, joka tekee kohtaamistilanteista luontevia. Toisaalta sen edellytyksenä on osallisten vastavuoroinen panostus tilanteessa. Tämän lisäksi myös paikallisilla tilatekijöillä on vaikutusta seurallisuuden muodostumisessa. Radice (2016) esittää, että tukeakseen seurallisuutta paikkojen on oltava saavutettavia, heterogeenisiä ja joustavia. Rodriguez ja Simon (2015) muotoilevat saman asian toisin: sosiaalisen seurallisuuden keskeiset olosuhteet muodostuvat fyysistä tiloista, jotka ovat joustavia, muuttuvia ja mukautuvia; prosesseista ja lopputuloksista, jotka ovat tasa-arvoisia ja demokraattisia; sekä toiminnoista ja ratkaisuista, jotka vastaavat ihmisten tarpeisiin ja toiveisiin.

Esitys pohjautuu tutkimukseeni osaan, jossa tarkastelen keskieurooppalaisten integroidun asumisen kortteleiden tilallis-toiminnallista rakennetta, erityisesti asukkaiden yhteisessä käytössä olevia jaettuja tiloja, etsien tilan ominaisuuksien kautta muodostuvia edellytyksiä sosiaaliselle seurallisuudelle. Korttelit on mallinnettu tilamalleiksi, ja niiden jaetut tilat on luokiteltu Gehlin (1997, 2010) inhimillisen ulottuvuuden ominaisuuksien ajattelutavan pohjalta luodun tilaluokittelun avulla. Analyysissä Gehlin toimintoluokitus (välttämättömät, vapaaehtoiset ja sosiaaliset toiminnot) kertoo tilojen heterogeenisuudesta, ja tilojen näkö- ja kulkuyhteydet, monikäyttöisyys, muunneltavuus ja se keiden käyttöön tila on tarkoitettu saavutettavuudesta ja joustavuudesta. Tutkimuksen mallipohjainen tarkastelutapa mahdollistaa tilojen ominaisuuksien havainnoinnin kohteiden tilakokonaisuuksien tasolla. Korttelimittakaavassa on luontevaa tarkastella asunnon ja kaupunkitilan välisiä liitoksia, jotka jäävät kaupunkisuunnittelun ja asuntosuunnittelun välissä usein liian vähäiselle huomiolle. Tulokset kertovat tilojen ja tilarakenteen

luomista potentiaaleista, nostavat esiin integroidun asumisen kortteleiden erityispiirteitä, ja luovat pohjan tutkimuksen jatkossa tehtävälle erilaisten tilaominaisuuksien, toiminnan ja niihin liittyvien kokemusten välisten suhteiden tarkastelulle.

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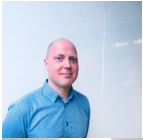
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Pirinen, A., Tervo, A., & Meriläinen, S.

ORAL&PAPER Presentation



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Anne Tervo is an architect M.Sc. and lecturer of housing design at the Department of Architecture in Aalto University. Her doctoral studies focus on the growth of one-person households examined from the perspective of urban housing design. The social aspects of home environments and housing related shared spaces are at the core of her research interests.



Sanna Meriläinen is an architect M.Sc. and works currently in city planning at the Helsinki Urban Environment Division. In her work for Suunnittelukiila she explores the field between design practice and research. Her research interests lie especially in housing architecture and its historical and social context. Her book *Tavallisia koteja* documenting 20th century Finnish housing architecture was published in 2016 by Rakennustieto

To Share, Or Not to Share: A Design Game For Developing The Shared Spaces in Housing

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Extended abstract

Introduction

The increase of one-person households, the scarcity of dwelling area in cities and the emergence of a sharing economy driven by digitalisation and a new sense of community necessitate the reconsideration of shared facilities in housing. At the same time, a large proportion of the Finnish housing stock is reaching renovation age, which calls for the adoption of more efficient, flexible and personalised ways of using the existing spatial resources. The gap between housing demand and supply is an ongoing discussion in the housing field. Particularly in rental housing, the residents rarely have an impact on their living environment. New methods and tools are needed to learn more about housing preferences in a manner that is relevant to housing development.

This paper presents a design game that was created to study the perceptions towards shared spaces among the solo living tenants of a Finnish rental housing provider. The theoretical framework is defined by participatory research methods and design games. The paper contributes to housing studies by documenting a game-based method and providing empirical knowledge on residents' preferences. It adds to research on design games and discusses how a game-based method can be applied in different contexts.

The paper is structured as follows: The second chapter discusses the growth of solo living from the perspective of shared domestic spaces. The third chapter describes the theoretical framework. The design game developed in the case project is presented and explained in the fourth section. The conclusions discuss the benefits and challenges of the game method and propose how it could be developed further.

Combining solo-living and shared domestic space

Household size has decreased rapidly in western societies. In Finland, the average household size has decreased from 3.34 to 2.01 between 1960 and 2017 (OSF, 2017a). In 2017, 43 percent out of the 2 680 077 Finnish households were one-person households. In the City of Vantaa, where the case project was conducted, the number of households was 104 180 equalling 43 percent share of one-person households. (OSF, 2017b).

In terms of dwelling sizes and types, the growth of one-person households does not necessarily entail new spatial needs, since urban solo dwellers would often like to have a dwelling with several rooms rather than a one-bedroom dwelling (Tervo & Lilius, 2017; Backman, 2015; Silvonen & Hirvennoinen, 2002). However, the relatively high cost of living alone may prevent them from achieving their preferred housing conditions. Having the opportunity to share space provides one way for approaching this issue. Here, however, the household size matters: Whereas sharing spaces is common in the case of families, the opposite is true in solo living. In addition, sharing spaces between small households requires flexibility that is rarely embedded into the existing dwelling stock.

Participatory research methods and design games

The theoretical framework of the study connects to research on participatory design and co-design as well as to the notion of design games. A design game can be defined as an approach, method or tool used in the design process that is based on a game logic (Brandt, 2006; Vaajakallio, 2013). Design games are characterised by game-like appearance, rules and process, and are typically utilised in the early stages of the design process for eliciting user needs, facilitating shared meaning-making processes and envisioning new solutions.

Game based methods have mainly been used in product design and service design. In our case project, we wanted to explore the relevance and potential of design games in the context of housing. The aim was to develop a field-specific design game that would provide outcomes that are relevant for housing design.

A design game for developing shared spaces

The case project brought together the themes of solo living, rental housing and shared spaces. The objective was to find out under what conditions shared domestic spaces could interest solo dwellers. The participants were working-aged solo dwellers (n = 24) who lived in rental dwellings owned by the City of Vantaa.

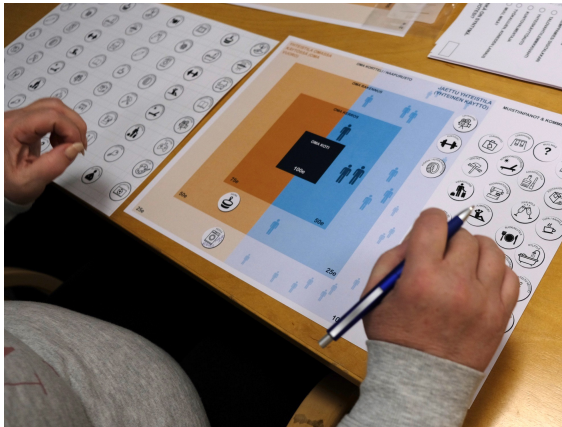
Analysis of international case examples illustrating different approaches to sharing space led to a map determined by two axes: the way of using shared space (communal or private), and the core emphasis in the examined solutions (space-centred or service-centred). This map provided the basis for the game board, which was further divided according to different levels of the built environment (floor, building and block) (Figure 1). The game tokens consisted of a broad array of functions or spaces of dwelling. The participants selected their preferred functions or spaces and positioned them on the board, indicating on which level they would like to have the shared function and whether they wanted to use it privately or together with others. Importantly, the game incorporated an economic factor to guide the elicitation, thus simulating real-life choices.

Comment [MOU1]: Pitäiskö tässä käyttää jotain muuta sanaa kuin framework, joka käytössä edellä teoreettisen rajauksen yhteydessä.

En tiedä sopsisiko concept.

The game method provided resident profiles based on the participants' perceptions towards shared spaces and information on the popularity of different types of shared spaces. An interesting outcome of the study were 'space bundles', combinations of shared spaces that the participants connected with each other.

Figure 1. The game board and tokens.



Conclusion

The study proposes that a design game could be utilised in new housing projects as well as in reprogramming the spaces in existing buildings to meet the spatial needs of households that are interested in sharing domestic spaces. The main benefits of the game method developed in the case project with solo-living tenants were:

- The game provided a research tool for collecting qualitative data in connection with housing design, with some accuracy regarding economic choices.
- The game led the participants to weigh the dwelling functions, to negotiate the boundaries between shared and private and to reflect on themselves as residents.
- The outcomes indicate variety in individual preferences related to shared space and open up different resident profiles.

The experiment also revealed some problems and development needs:

- Utilising the game method in workshops is rather time-consuming and the sample may remain small. A digital version of the game would provide a possibility to have a bigger sample and the data would be easier to analyse. Broader application of the method could also yield valuable data for research.
- To gain outcomes that are really linked with design processes, and thus beneficial for architects, planners and building developers, the game should be adjusted for specific contexts, such as the design of new housing and renovation. This would allow to examine the dwelling aspect in relation

to the location and other environmental features as it is the case with housing preference studies (Hasu, 2018; Ilmonen, 2017, p. 42, 4; see also Boumeester, 2011, p. 30).

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Sandman, Helena

ORAL&PAPER Presentation



Architect M.Sc. Helena Sandman is a member of the New Global multi-disciplinary research group at Aalto University as a doctoral candidate in the design department at Aalto University. Her focus is on user-centered empathic design where she uses architecture as an empowering tool striving for social sustainability. She is also founding member of Ukumbi NGO providing architecture as a means of development and a partner in Hollmén Reuter Sandman Architects Ltd as well as owner of Helena Sandman Ltd. Helena has been teaching multidisciplinary student teams in project-based slum upgrading since 2009 and is currently teaching the Interplay of Cultures master level studio course at the architecture department at Aalto University.

Shouldn't All Architecture Be Designed With Empathy?

A case of design probes for affordable housing design in Zanzibar

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Summary

Rapid urbanization and, as a result, fast growing slum areas in developing countries challenge the built environment. This paper argues that to build sustainable communities the inhabitants need to be heard and be a part of the development process. Thus, affordable housing design in these settings require new forms of input from architects as well as contextually suitable and effective design methods for engaging inhabitants in the design process. The paper suggests that architects can get support from human-centred design and particularly from Empathic Design methods.

Keywords: Affordable housing; design probes; empathic architecture; empathic design; inhabitant engagement.



User engagement in Ng'ambo, Zanzibar town, Tanzania. Photo: Helena Sandman

Abstract

Rapid urbanization and, as a result, fast growing slum areas in developing countries challenge the built environment. The needs are seldom met early enough, and uncontrolled urban sprawl is generated. This poses threats to the long-term sustainability of urban growth. To meet the needs of the inhabitants in a sustainable way the first step is to know what the needs are. To get to know this the inhabitants have to be heard and be a part of the development process. Several aspects of mainly social and cultural, but also economic and environmental sustainability depend on an interaction with the inhabitants (Sandman et. al. 2018). Only through listening to the inhabitants we can build resilient sustainable communities. This paper argues that affordable housing design, slum upgrading, and reconstruction require an empathic approach, new forms of input from architects as well as contextually suitable and effective design methods for engaging inhabitants in the architectural design process. Engaging users in the process is a complex challenge, but nonetheless necessary to resolve to reach sustainability. The initiative to encourage architectural design in this direction in developing countries is a pursuit for holistic sustainability (Escobar-Tello 2016).

Architects are in a key position in the development of the built environment. Professional architects are necessary (and sometimes legally required) in rapid urbanization processes. In the Global South where the growth of cities is the fastest there is a scarcity of architects, whereas in the Global North the profession is represented twentyfold and there is a longer tradition of participation in design and architecture. This entails situations in the Global South where an architect may be unfamiliar with the locality, and may come

from a different culture, class or society within or beyond the continent or may simply be very limited in time. All these aspects can make it overwhelming to put adequate focus in involving inhabitants in the design process. However, if empathy is a main driver in the architectural design process, designing across levels is possible. In the endeavour to develop their competency in a more empathic direction and to include inhabitant engagement in their design process we suggest that architects find support from human-centred design. Human-centred design of different kinds and levels is widely known and utilised in the design discipline to create products and services that match the needs and preferences of the users (Steen 2011).

In this paper I focus particularly on one part of human-centred design, Empathic Design. The term Empathic Design originates in innovation; for companies to be commercially successful, the products they sell need to meet the needs of the customers (Leonard et al. 1997). Peculiarly, meeting the needs of users who contribute to business innovation can also support the achievement of social and cultural sustainability in an architectural context when meeting the needs of the inhabitants. The origin in the relatively fast paced commercial world has brought forth methods that are versatile and agile. In the fast development of cities in developing countries these methods can be advantageous compared to rather substantial processes of more traditional participatory design practices. Maybe the involvement of the inhabitants can be lighter, and a less rigorous process is good enough if the architect facilitates the design process with empathy? The foundation of Empathic Design is that researchers and designers, and in the case of this study, the architects, are seeking interaction with the end-users or future inhabitants of a housing scheme, trying to empathize with their life experience from a very early stage of the design process. Empathic Design is defined as a set of design techniques based on observation of the users in their normal, everyday routines that develops deep empathic understanding of users' unarticulated needs (Leonard et al. 1997). Design Probing, the Empathic Design method used in this study is a qualitative method of gathering inspirational data in interaction with users (Mattelmäki 2006).

The study is done as participatory action research of an affordable housing design project in Zanzibar town, in Tanzania. Building trust in housing projects in fast growing cities in developing countries is often challenging, as the inhabitants in general find themselves under threat to be deprived of their homes. The architectural design project in Zanzibar Town represents a typical case in this respect, and the findings are likely to have relevance in design processes under similar circumstances. The central area of the town needs to accommodate more inhabitants, as the city is growing fast, and an expanding urban sprawl is a threat to the already densely populated island as the city overspreads valuable agricultural land (Juma, 2014). The people in the central parts of the city are in a vulnerable situation, as many of them have been living in this area for decades and to the forthcoming changes are inevitable. The building of trust is therefore both challenging and important. The paper focuses on the early stages of the design process.

A deep dive into the Zanzibar case introduces Design Probing to the architectural design process and shows one example of how this method can be applied to housing design. The process clarifies the importance of empathy while designing in settings with contextual constraints. Probing functions as a bridge between stakeholders in this case, where the limits to being truly participatory are acknowledged. Considering the short period of involvement and the distance between the stakeholders the outcomes of the probing were fruitful. Based on the analyses of the results of the exercises we suggest that Design Probing can be a means to engage inhabitants and help architects to find factors that lead a community towards sustainability. The conclusion of the paper states that Design Probing as a method is useful for housing projects in developing countries and that an empathic approach in these kinds of projects is a must.

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Sandman, Helena & Levänen, Jaakko

ORAL presentation

Architectural Design for Maternal Health

Empathic Design enabling sustainable replicability

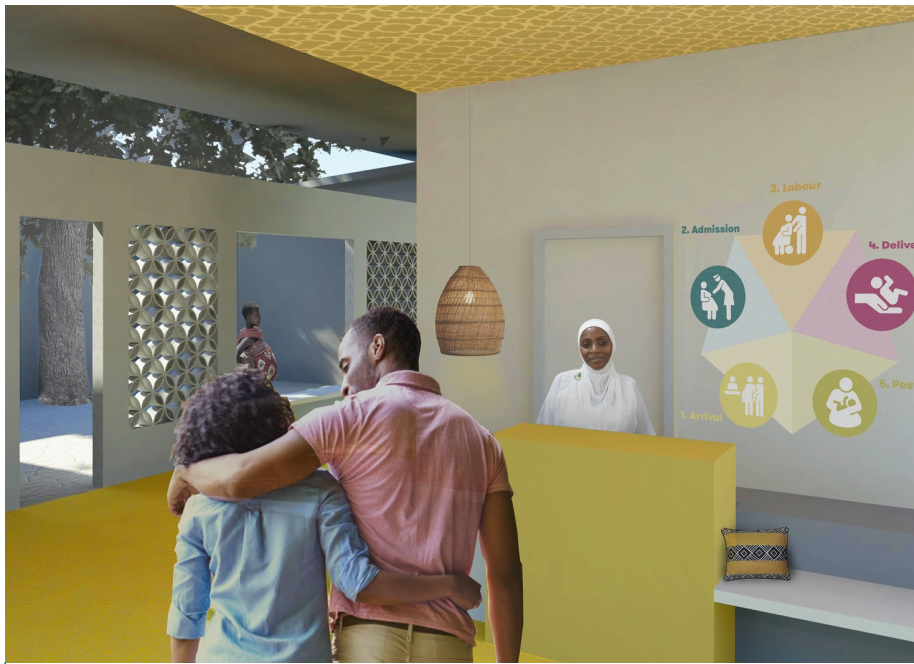
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Summary

Simultaneous replication and customisation represent a paradox. In this paper we ask how replication and customisation can be brought together to reuse ideas and solutions in multiple places and situations to solve global problems in a sustainable way also on a local level. The study is done through action research of a labour ward concept for low-resource settings. The outcome of the paper shows that if the concept is implemented according to empathic design principles, taking the locally attachable aspects into account, it is possible to replicate a concept sustainably.

Keywords: Maternal health; empathic architecture; empathic design; user engagement; healthcare design.



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Welcoming entrance space rendering

Abstract:

Designing sustainably with empathy would normally mean custom-made design. The idea of replication is contradictory to that. In this paper we discuss how replicable concepts can be sustainable in different local contexts. Sustainability can be enhanced as a principle in replicable concepts, however many aspects of sustainability relate to local circumstances, such as local climate conditions, available resources and local habits. This suggests customised design, even though simultaneous replication and customisation are paradoxes. We ask how customisation and replication can be brought together to reuse ideas and solutions in multiple places and situations to solve related worldwide problems in a sustainable way also on a local level.

We study the design process of a labour ward concept for low-resource settings through action research. The project in focus is multi-disciplinary and funded by Bill and Melinda Gates Foundation. The first phase of the project resulted in a concept that was planned to be replicable. The second phase constitutes the first implementation of the concept in an existing facility in Balasore, India. One aim of the design project is to attract a greater number of women to deliver in health care facilities as an alternative to home delivery, to decrease the number of child and maternal deaths. The impact of an unpleasant birthing experience in general, and also related to the physical space, if it is unclean and packed with people, is additionally to physical also psychological (Liljestrand 2016). Another aim is to improve the quality of care and through that the labour experience of the woman. The quality of care is defined in a way that dignity and worthiness of the patient is central to everything (Meguid 2016). Improving architecture is one way to engender dignity and enhance wellbeing (Hollmén et al. 2018). The design focuses on the flow of the labour

journey in the architectural space to create order in a situation that otherwise would appear chaotic for the woman. Chaos can easily evoke fear while order evokes fate. The concept development was based on a problem-based approach following principles of social and environmental sustainability as well as empathic design.

The data used for the analysis of the implemented prototype is a base-line survey done before the implementation and a follow-up survey after the refurbished labour ward have been in use for one month. In the theory we develop a lens that is based on sustainability and empathic design principles. With the help of the lens we will delimit the perspective of the study of the existing situation in the labour wards to three core design aspects: flow, wellbeing and environment.

The purpose of this study is to understand how an empathic approach and the use of methods borrowed from Empathic Design can attach a replicable concept locally to varying cultural settings and furthermore, through the local attachment make the design sustainable. Empathic Design suggest a sensitive approach that can support the architect and other stakeholders to understand diverse and transformative conditions of people in different cultural and social settings. (Koskinen et al. 2004, Mattelmäki et al. 2014). Even if a replicable concept in itself would be designed as sustainable, some of the aspects will not be sustainable if not modified according to local circumstances and local use. Based on the analyses we are capable to define what constitutes the replicable concept and what aspects needs to be modified locally, to obtain a sustainable result. The outcome of the paper shows that if the concept is implemented according to empathic design principles, taking the locally attachable aspects into account, it might also be possible to replicate a concept sustainably. As conclusion we argument, that this case study tells an empirical example of how sustainability and empathic design principles are possible to use in practice while developing a design concept.

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**Extended Abstracts for
Session B4**

LEARNING & PEDAGOGY

Room A123
Chair: Anni Vartola

10th Architectural Research
Symposium in Finland

ATUT 2018

*Global North – Global Challenges
and Local Responses
in Contemporary Architecture*

Address: Otakaari 1X, Espoo.
(nearest Metro station: Aalto University)

Chudoba, Minna

ORAL Presentation



Minna Chudoba is university lecturer at Tampere University of Technology, School of Architecture. Doctoral dissertation *Kaupunkia etsimässä – Eliel Saarinen Amerikassa 1923-1950* (Search for a city – Eliel Saarinen in America 1923-1950) was published in 2011. Research interests include history and theory of modern urban planning, especially typomorphological changes, international interaction in the 20th century and the development of architectural pedagogy.

Urban Planning in Architecture Education

– Eliel Saarinen's Pedagogical Text Revisited

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Summary

In 1925 Finnish architect Eliel Saarinen drafted a curriculum for a newly formed architecture education at the Cranbrook Academy of Art near Detroit. He called for a contemporary view, criticizing many of the traditions of architecture education. His ideas reflected a practicing architect-planner's perspective. Today, urban design and planning pedagogy includes increasing amounts of multi-disciplinarity. In addition to design skills, many other topics have been seen necessary for an architect. In this presentation, Saarinen's pedagogical text from 1925 is revisited. It is mirrored against current urban planning education, with its focus on problem-based learning and emphasis on multi-disciplinarity.

Keywords: Architecture education, urban planning education, multi-disciplinarity, problem-based learning.

Eliel Saarinen's Pedagogical Text Revisited

In recent decades, urban design and planning pedagogy has included increasing amounts multi-disciplinarity in its premises. Design skills have not been enough, when social dimension is such an essential part of strategic city planning and understanding of urban development. Temporal dimension is important as well, as architectural education is always dealing with the past, present and future. One must understand history while dealing with the challenges of contemporary time. Design profession is also, by nature, future-oriented.

In 1925 Finnish architect Eliel Saarinen was faced with the task of writing a curriculum and study plan for a newly formed architecture education at the Cranbrook Academy of Art. The manuscript

he wrote offers now a glimpse into the pedagogical thinking of an internationally known architect and urban planner. Understandably, also he dealt with the questions of the past, present and future. He called for a contemporary education, criticizing many of the traditions of architecture education. At the same time, he formulated his opinion about modernist architecture and issues that were current at the time. His ideas reflected a practicing architect-planner's view, and included contemplation about the role of urban design and planning studies in the education of architects.

The manuscript from 1925 is both general and specific. The more general parts about understanding architecture ended up later in Eliel Saarinen's book *Search for Form* (1948). The specific parts dealt with the details of the curriculum at Cranbrook Academy of Art. City planning had its own particular role in the architecture program. According to Saarinen, not all architects became city builders, but every architect must know city planning. Seeing the whole was an important part of solving design problems, and understanding the mutual connection between a building and its surroundings was essential. Saarinen encouraged finding actual projects to study, often in students' hometowns. The teacher's role was to awaken interest and inspiration in the students, to lead the pupils to a clear understanding of universal design principles, as well as help in the development of a student's individuality.

Much of the teaching was organized in a workshop-like setting, which took a real architect's office as its example, even as far as its name: The Architectural Office. Saarinen thought his own background as a practicing architect very important in the teaching role; it was the source of a teacher's inspiration and strength. By modelling the learning environment after an architectural office, he was recreating anew the traditional master-apprentice type of education. In this case, peer learning was included in the learning pattern. With The Architectural Office, the school was ready to answer design inquiries from the surrounding community. Execution of practical work was the goal. Thus, a functioning link was created between the art academy and the community it was situated in, opening the doors to the academic environment.

When the educational ideas proposed in the now 93-year old manuscript are mirrored against current urban planning education in Finland, specifically in Tampere University of Technology, some similarities can be found. Architecture education, since its very beginning, has been based on learning in a design studio type of environment, where the students are given a design task, and then guidance is offered, while the design evolves on the drawing board. This has proven a useful method in urban planning and design as well, even if planning methods have evolved and cities face many new challenges today. Real design tasks are still a backbone of teaching, now even spiced with sparring participants recruited from the cities under planning. Negotiations are by nature multi-disciplinary, as real planning tasks would be. The learning is explorative and problem-based, with the tasks sometimes purposely left vague, giving room for the students to formulate the necessary questions themselves. Freedom and responsibility go hand in hand, as they must have also done in Saarinen's time. Learning objectives include critical thinking, in addition to knowledge of the existing planning system and relevant laws and regulations. Once again, these are best learned in real situations, offering a possibility for reflection and eventually reshaping and renewal.

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ORAL&PAPER Presentation



Dr. Helena Marja Teräväinen is today working as university teacher and researcher at Aalto University, School of Arts, Design and Architecture. She has published several conference and journal papers in English and has had several grants from cultural foundations for writing and photographic exhibitions. Her doctoral thesis in architecture with specialization in the urban planning and design was "Old Paukku in Lapua – Re-Built and Re-Spoken. Discursive Formation of Cultural Heritage in a Case Study" (in Finnish) and it is available <http://lib.tkk.fi/Diss/2006/isbn9512283611>

Fabio Jose Martins de Lima is an architect and professor at the Federal University of Juiz de Fora (UFJF), Brazil. Since 1994 he has been linked to a research on the cities' history in the state of Minas Gerais, Brazil. In 2011 and 2012 developed a Postdoc Internship at Università IUAV di Venezia, sponsored by CAPES. This research approach is linked on the activities of the research group "Urbanismo em Minas Gerais" based on FAUUFJF with support of CAPES, CNPQ, FAPEMIG. CV: <http://lattes.cnpq.br/8637271768339853>

How to Read Urban Space: Research and Learning in Juiz de Fora, Brazil

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Summary

This paper presents the process of a research workshop organized in Juiz de Fora, Brazil. The authors share research interests of cultural heritage and urban planning. In the workshop Brazilian students of architecture did field work in the city centre, observing people using public spaces. Everything was documented in photographs, notes, recordings and maps. Pictures by a designated tag were posted in Instagram, to share the information. The aim was to explore the urban ambience, also invisible values in the confused dynamics of the urban centre and cultural heritage. In the end students presented their findings and conclusions in the common seminar.

Keywords: Urban Planning, Cultural Heritage, Requalification of Public Spaces, Comparative approaches, Research-based learning, Collaborative learning, Workshop

Background

The workshop organized 2016 at the Federal University of Juiz de Fora was part the continuity of previous dialogues, since 2012, between the two teachers from different cultures, and this approach involves a historical perspective with an ongoing comparative analysis. In the workshop, Brazilian students of architecture studied urban life in the city centre by observing people using public spaces. Everything was documented in photographs, notes, recordings and maps. During the workshop pictures were posted in Instagram, by a designated tag, to share the information and results. The aim was to explore the urban ambience, also invisible values in the confused dynamics and cultural heritage in the urban centre. The

workshop was prefaced by lectures on Finnish knowledge of urban planning and research methods, and examples about urban regeneration. The actual aim was to show students how to design a research project and reach a critical view of analysis, in order perhaps afterwards to make proposals for requalification.

The study

The topic in the workshop December 2016 in Juiz de Fora was to study urban life in public spaces in the old city centre, whose origins date back to the middle of the 19th century. The aim was to show the importance of public spaces. In other words: How people or groups of people are using the public spaces, in different moments of day and night? The students were divided in four groups and they had each a restricted circular area on the map for their research and could use one day and one night to observe and make notes in the centre. Photographs by the Orange, Red, Green and Blue Group were posted in Instagram, #JFandHKI (142 posts) and data was shared also through Facebook, "GET Arq/Urb UFJF".

After the observations and the visiting teacher's short lectures in the Market hall, the students collected their field work as presentations. In the common seminar both teachers and fellow students were commenting and criticizing the works. The visiting teacher seemed to be more pleased about the results than the responsible professor, which maybe originated due the different cultural and educational backgrounds.

Afterwards, when the visiting professor had already left Brasilia, the GET Educational Tutoring Group (students and tutors) evaluated the workshop. These evaluation reports claim honestly of the failures and success in the course. The students' assigned work was not seen reasonably done, perhaps due to the lack of English skills and lack of time, and because of that, they were ordered to remake the assignments in next weeks. Even though the exchange of knowledge was seen excellent, the GET evaluated that because of many topics and discussions more time to assimilate the information would have been better.

Theoretical framework

The workshop was framed to include "cultural heritage" in different words: How can we notice something to be significant for people? The concepts of "urban life", "urban culture" and "public space" are intertwining together, when the observing field work in the city was going on. All of them carry on a heavy theoretical background, but this was not opened in the workshop. In the discussions dissimilarities were found between Finnish and Brazilian thinking and practices concerning the concept of cultural heritage. Anyway, according the Foucauldian discourse analysis, we can claim the experience of the place, memories and local narratives to construct the meaning of the cultural heritage (Teräväinen 2006, 2018). The research questions here lie on two levels: firstly, handling the shared interests on urban spaces and cultural heritage, and secondly focusing on the workshop as a learning method, reflecting the situation in both countries. The educational objective was to give an introduction to the premises of research and the nature of scientific, critical thinking. Even though students' written products remained exiguous, the teachers' observations and discussions with students produced 'thick description' of the urban public space and culture in Juiz de Fora, and the workshop was successfully promoting the importance of human scale in urban design and bottom-up knowledge for the cultural heritage.

Expected results

The workshop is evaluated as learning method. Communicative and collaborative turn in urban planning has of course had an impact on the teaching and learning methods, too. Today the Finnish author (here) sees the learning as a research-based process in the era of collaborative and communicative actions, but the basement lies in the socio-cultural context, following Vygotsky's theories. The background of this learning thinking lies in a multidisciplinary research project Inno School, where the research "*Spaces and places for learning*" she conducted 2007-2010 in the Department of Architecture (Helsinki University Technology, today

Aalto University). Teaching in architecture has a long tradition leaning on John Dewey's "learning by doing" and David Kolb's "experiential learning" (Dewey 1934; 1950, Kolb 1984). The central idea is that "knowledge is created in the learning process" and the communicative, transformative learning process by Mezirow (2000) supports that steadily.

Discussion

The workshop discussed in terms and concepts which aim to raise understanding on the cultural heritage. The results are expected to be linked with students' awareness of the importance of public spaces. This learning about public spaces prepares the students, considering them as future urban planners and designers, to a different approach which includes a view to capture the cities presenting themselves in their inner self. This paper is going to continue the dialogues, since 2012, between the two teachers and the approach involves a historical perspective with an ongoing comparative analysis.

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Vesisenaho, Mikko & Lievonen, Mirja

ORAL&PAPER Presentation



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Heading at Enabling Settings For Learning

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Summary

The paper draws on two cases in which old learning settings were converted to meet up-to-date educational requirements. The authors address here the role of stakeholder perspective in a redesign process. Focusing on the interface of the learner and the setting in a learning situation, they present an articulation tool to aid dialogue between different stakeholder perspectives in figuring out relevant issues and in constructing common ground in the course of a redesign process.

keywords: learning, enabling setting, spatial design, functional affordances, stakeholder perspectives

Extended Abstract

Heading at enabling settings for learning

This paper is based on our involvement in and learning from two projects where learning settings were converted/redesigned to meet up-to-date educational requirements. The first case was a British one in higher education, a conversion of a lecture theatre to meet the requirements for lecturing to a class that was attending both from the local and the two remote sites (Lievonen, 2015). The latter one was a Finnish case, school premises redesigned for upper secondary education (Lievonen & Vesisenaho, 2013; Lievonen & al., 2014).

When old premises are redesigned, many stakeholder perspectives are involved in it. Each of them has a different focus of interest, and each of them implies specific type of experience, knowledge background and expertise. In this paper, we focus on the role of stakeholder perspective in the formation of common ground between relevant stakeholder perspectives in the course of a redesign process.

A learning situation implies availability of particular material and informational resources to the learner. Hence, we consider learning a goal-oriented situational activity. It is a sort of navigation that employs spatial, social and instrumental (natural / human-made) resources in proceeding towards goals that are set for learning. To put it in spatial terms, we consider that learning takes place in the interface of the learner with his/her surroundings.

Our theoretical point of departure is Dewey's 'learning by doing' (Dewey, 1938); we consider it to be relevant in the construction of the 21st century skills (e.g. Griffin, McGaw & Care, 2012).

Due to an accelerating pace of cultural/technological change, complementarity of the learner and the setting is an ever more challenging issue for spatial design (Lievonon & al., 2016; see also Vesisenaho & Dillon, 2013). Within an educational system, a curriculum sets particular learning goals to be attained. Learning situations have rapidly diversified as educational technology has gained much attention, and technological tool and services providers keep promoting their products and services. The pace of technological change implies that people tend to end up in an ever accelerating 'adaptation rat race' in order to keep up with it. At the same time, sustainability and flexibility are two key criteria when developing products and services for the future. The question is what needs to be taken into account in the 21st century when designing settings for learning. What provides functional settings for learning?

An informative, articulated and constructive dialogue between relevant stakeholder perspectives is paramount in the redesign process in order to reach an outcome that is 1) well informed of user requirements, 2) embedded in local culture and practices, and 3) based on research-based understanding of learning and of tools used in education. Articulating issues of relevance in terms of what contributes to enabling settings and at the bottom, functional affordances for learning is one way to aid dialogue between relevant stakeholder perspectives and to figure out a shared view of learning situations.

During our research observation, we could see it is not always easy for the users to specify their standpoints, practices and requirements in terms of spatial design. (Lievonon & Vesisenaho, 2013). As the scope and the focus of one perspective is always limited, it is important to relate it to other perspectives and to locate its contributive role in the whole process. Based on literature and data from the latter case (upper secondary education), we classified four different sets of criteria for describing the settings: physical, aesthetical, social and instrumental. We figure out focal issues between relevant stakeholder perspectives by converting three approaches to (formal) learning and its outcomes:

1. Who is acting (with whom)?
2. Where does activity take place?
3. How / by which means is activity unfolding?
4. What / Whatfore is its outcome?

As an outcome, we present a simple articulation tool based on four cognitive categories and their interrelations to aid dialogue between different stakeholder perspectives, and to figure out relevant questions and constructing common ground in the course of a redesign process.

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**Extended Abstracts for
Session B5**

**MULTICULTURALITY &
IDENTITIES**

Room A125

Chair: Laura Arpiainen

10th Architectural Research
Symposium in Finland

ATUT 2018

*Global North – Global Challenges
and Local Responses
in Contemporary Architecture*

Address: Otakaari 1X, Espoo.
(nearest Metro station: Aalto University)

Chung, Simone Shu-Yeng



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Life In The Fourth

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Summary

The merging of technologies and integration of digital interfaces in this millennium have not only altered live-work culture, established notions on place-making and the formation of human relationships, but also imbue the everyday lived experience with new subjectivities. Global connectivity enables people to roam virtually in addition to physically, oftentimes simultaneously, leading to the blurring of the physical and digital divide. This paper pursues a specifically spatial-experiential framing to derive insights into the link between affordance and agency for adept global nomads who negotiate the new live-work landscape in this digital era.

Keywords: digital age, multi-dimensional living, human-centred space, place-making (process), social relationships

Extended abstract

In the current Fourth Industrial Revolution, the merging of technologies that underpins this epoch (Schwab, 2016) has irrevocably altered our notions of home, work, travel, place-making and even how human relationships are managed. The integration of digital interfaces in our everyday practices furthermore imbues us with new subjectivities and invites us to consider what it means to be a “four-dimensional human” (Scott, 2015). Technological and digital affordances support simultaneous inhabitation of discrete spatial dimensions in both the physical and virtual realms

seamlessly. In this era, digitally savvy self-styled media “celebrities” are able to maintain a fluid online and offline presence, expanding their spatial reach *ad infinitum*. With deference to Bauman (2000), this age in which we live is truly a “liquid” one, where the speed and scale of travel, transmission of information and social networks are globally expansive. Global connectivity via enabling mobile devices, infrastructural diversifications and social media has created new affordances, whereby geographical proximity is no longer a criterion for co-present exchanges and social sustenance. This paper adopts the spatiality paradigm outlined by Hillier (2008) which places society first in attempts to understand our lived environment holistically, viewing it as the product of the spatial dimensions of social processes, societal influences and, in response to “life in the fourth” (industrial revolution and dimension), also consider the impact of the digital community.

A socio-spatial study of this sort needs to consider how the integration of digital technology has reconfigured the formation of individual construals, by how privacy lines are drawn, sense of ownership of territory and possessions, consumption and behaviour patterns, live-work culture, career trajectory and nurturance of relationships online and *vis-à-vis*. The inevitable integration of technology in the workplace portends a decrease in labour demand alongside rising automation. This means that the next generation of workers will have to contend with flexible jobs and short-term employment oftentimes working remotely to reduce overheads (Frey and Berger, 2014). In fact, some of the more future-forward individuals are already leveraging on their transnational mobility and relative accessibility of technology-enabled platforms, making an informed, requisite lifestyle adjustment in anticipation of rising under-employment and project-oriented work to ensure they remain laterally agile. This new live-work arrangement, even culture, can be viewed as servicing the romantic idea of embarking on adventures with the promise of new beginnings tied to continuous relocations as part and parcel of this new mode of living and travelling. Those who embrace such a fluidly mobile lifestyle are arguably global nomads, the contemporary embodiment of the adage “a rolling stone gathers no moss”. Of particular interest to this research project are the spatial rhetorics of this cosmopolitan group and we scrutinize them on a processual and affective level.

Initial studies via focused interviews with several global nomads and dynamic mapping of their spatial narratives revealed that their actual spatial demands are directly affected by each individual’s degree of digital dependency. This is particularly evident across the cyclical ritual of temporary place-making over successive relocations, from the networks utilised in choosing the next destination or job, online resources consulted and in turn, that person’s contribution of personal insights and sharing of information with others in the virtual community, emphasising the convergence of people and data in digital space. Facilitating this are also cyber-services that exploit the sharing economy market: in the residential sector, the global coverage of the hospitality-by-proxy of AirBnB have simplified short stay accommodation searches to the extent it has become an indispensable resource for contemporary nomadism. On the other hand, what crucially sets global nomads apart from itinerant or leisure travellers is also their tendency to form bonds with their host community and immerse themselves in the local culture on their own terms despite their relatively short stay in one location (Richards, 2015), since one can now remain connected to new friends and professional contacts across space and time zones.

At this level of diffusion, it is already evident that this enhanced performativity not only envalues people's quality of life but also infuses it with multi-layered meaning. What then becomes apparent is the need to foreground the present mode-of-being in order to articulate the qualitative dimensions of the lived experience; in other words, the structures of feelings (Williams, 1977). Complementing this would be what we term structures of living, which crucially acknowledges the greater agency individuals now possess in crafting their lives and living environments, with respect to global mobility and the endless amount of information available online. For those who embrace this peripatetic lifestyle, is there space then for sentimental attachments to place and objects? We argue that this new mode of living is made tolerable by being connected to loved ones over vast distances and relationships can still be nurtured remotely with the ubiquity of free video-telephony products, instant messaging apps and social media platforms. At the same time, it raises the importance of what it means to have a reference address: the sense of security tied to having a permanent address in a person's native country throughout one's extended stay abroad serves as a point of reference and loci for an essential mental and emotional anchor.

The research therefore seeks to formulate a new human-centred spatial rubric inscribed with the universal values shared by cosmopolitan individuals who subscribe to a contemporary mode of living that concurrently reflects the increasing dilution of conceptual spatial divides.

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**Hewidy, Hossan &
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ORAL&PAPER Presentation



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The Bazaar: "Retail Inventions" In The City

– Spaces By Immigrants

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Summary

In this paper we turn the attention to retail spaces as sources of self-organization of immigrants. The report 'Promoting ethnic migrants in Europe entrepreneurship in European cities' (2013), published by EU, noted that ethnic entrepreneurship might be useful as an effective integration vehicle, yet it's not reflected in policies and takes place spontaneously. Although the Finnish society in many ways plays a vital role in assimilating immigrants into Finnish society by providing housing, language classes, education etc., recent development in the Helsinki metropolitan area shows, that immigrants are increasingly organizing their services in suburban retail spaces, reforming the use of these spaces which are often neglected by Finns with non-ethnic backgrounds. We study multicultural manifestation, through ethnic entrepreneurship, in three suburbs in Helsinki: Kontula, Puotinharju and Malmi. In the paper we examine where in the Helsinki Metropolitan Area "bazaars" are forming, and which is the mechanisms of how these retail spaces come to use for ethnic (and local Finnish) groups. We are also interested in the status and future that these spaces are given in planning. What is the role of urban planning in responding to the growth of ethnic entrepreneurship? How are policy makers involved in ethnic retail developments? As a reference for the development of such spaces we are also interested in how spaces for immigrant retail are organized elsewhere, for example in Stockholm. We seek the answers for our questions through interviews with entrepreneurs, reviewing planning documents, interviewing planners and by observations of the architectural changes took place to make those spaces suitable for running the business.

Keywords: immigrant entrepreneurship, multiculturalism, multicultural planning, planning policy, space identity

Extended Abstract

The immigration to Finland during the last three decades has vividly impacted urban landscapes. Immigrants with their diverse cultures and needs, shape a new clientele. Consequently ethnic entrepreneurship started to appear to satisfy such needs. This paper contributes to the literature on ethnic retail and immigrant entrepreneurship (the latter term is in use in Finland). The paper is exploratory and adopts multiple case studies approach. We study multicultural manifestation in three suburbs in Helsinki: Kontula, Puotinharju and Malmi (map 1). We argue that a comprehensive vision needs to be integrated in the areas are being regenerated. We conduct this study through literature review, interviews with shopkeepers and entrepreneurs, interviews with planners at the City of Helsinki and a review of the planning documents.

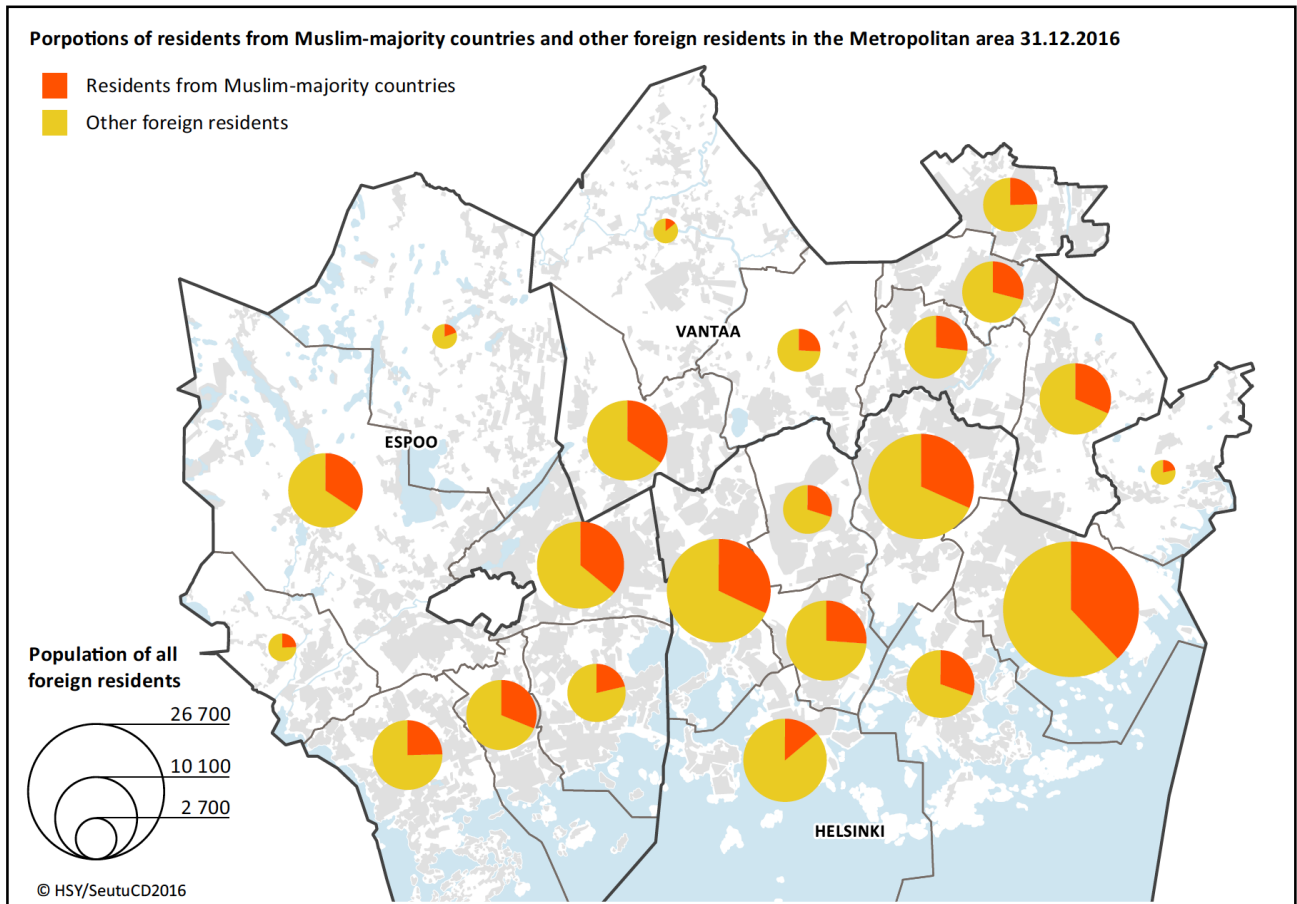


Map 1

Brief of the research

We consider this paper a second stage of our study, focusing on the over-representation of Muslims in certain areas in Helsinki (Hewidy & Lilius 2018, see map 2). Services for Muslims often occur in those areas in self-organized and spontaneous ways by the community, and we call for employing an integrative approach to provide a positive output of the over-representation.

Puotinharju mall, known also as Puuhos in Img 1 (two floors), and Kontula (one floor) mall became during the last two decades favor destinations for many immigrant entrepreneurs and they started to be vibrant commercial and cultural hubs.



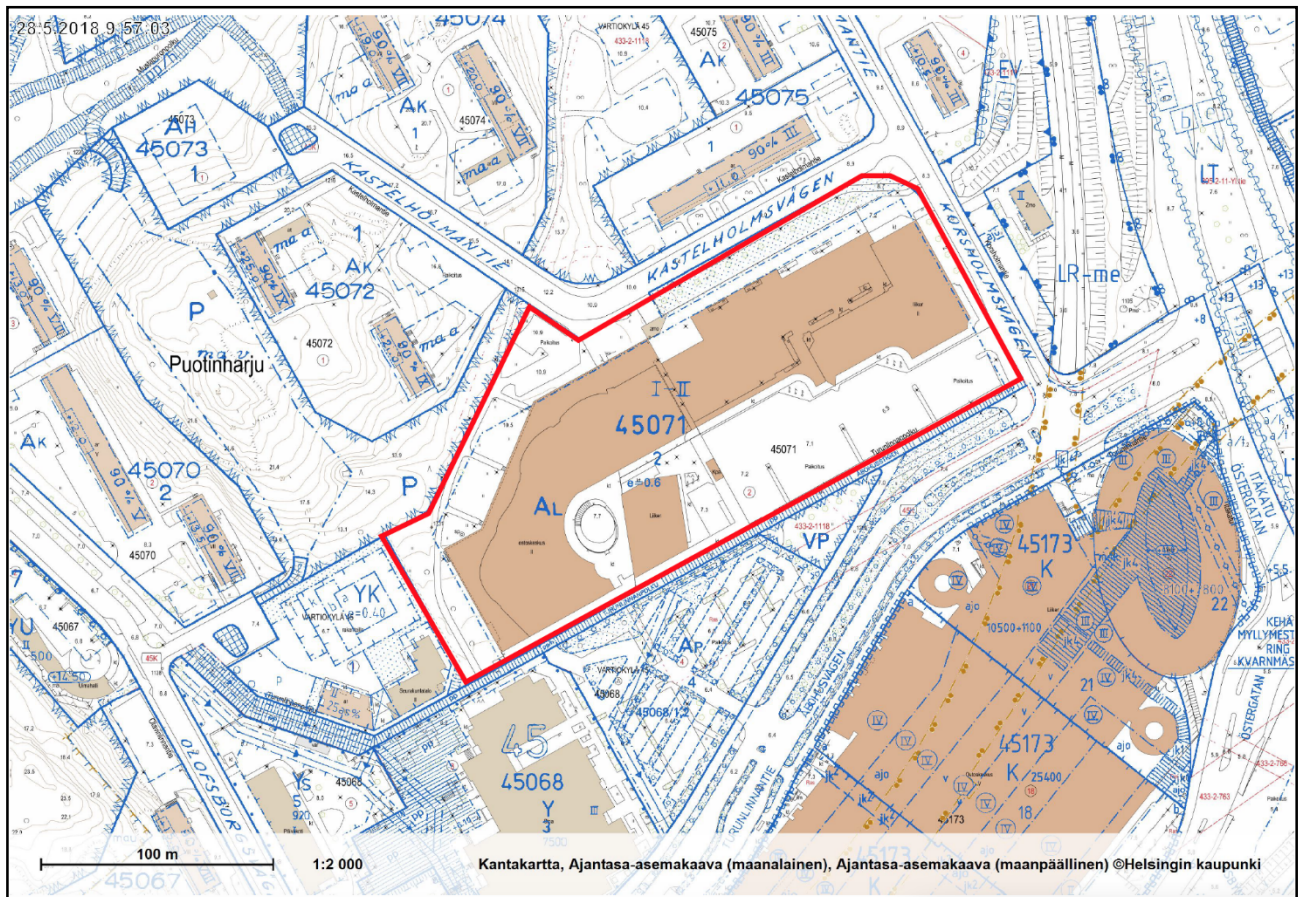
Map 2 (In Hewidy, Lilius, 2018)

Although Malmi hasn't such conversion at one property, there is ethnic retail scattered at several locations (see map 3). The diversity in cultures and consumer patterns as well as immigrants lifestyle restructured the retail landscape in these areas and has extended to the urban space 'outsiders' trade' in goods, services as well as customers. The Muslim background is obvious, shopkeepers, their workers as well as the customers. Trades and activities vary from halal meat butcher shops and oriental groceries to restaurants, cafes and bakery. Eyes couldn't miss other trades like travel agencies, money transfer services, Muslim women fashion shops or even 'men' barbers. There are also Muslim prayer rooms nearby in cases of Kontula and Malmi and one is already allocated at Puhos on the first floor (the upper level). A visitor may listen to many languages, smell different cuisines aromas, observe many strange goods and obviously deal with all the 'others' of the city. We put differently, it's there where a native Finn will feel a stranger, though few of them still have some interest and curiosity to experience the difference (see Img 2&3).



Map 3

In this paper we study such multicultural manifestation as a sign of the domestication of the public space. Such conversion has taken place rapidly and most importantly impulsively. In addition to the negative image of such conversion of public space on social media, rarely one hears about a 'multicultural' planning and development of these malls, but most commonly the discussion is about which is more efficient 'demolishing them' or 'the high cost of restoration'. However, on August 14th 2018 the city of Helsinki Environment Committee (Kaupunkiympäristölautakunta) decided to accept an offer submitted by a private developer NREP to develop the Puhos area (as in Plane 1). Nordic Real Estate Partners (NREP) operates as a real estate investment company, focuses on commercial and residential properties. Documents and process of this decision will be also part of this paper.



(Plan 1), appendix of City decision

The literature on ethnic retail and minority business ownership has boosted as swiftly as its subject matter. Being interdisciplinary by nature, the ethnic entrepreneurship is in the interest of many academic disciplines, for e.g. in sociology, economy, ethnic studies and migration as well as business and entrepreneurship. However our knowledge of its complexities is far limited especially in the literature on multicultural planning, as a useful source to planning practice as well as the perception to multicultural urban space.

The questions we try to find answers for are:

What is the role of urban planning in responding to the growth of ethnic entrepreneurships?

How are policy makers involved in ethnic retail developments, do they adopt multicultural planning approaches? If not, what are the implications of ignorance?

In order to seize a wider comprehensive range of ethnic retail formations, three cases are studied. Multiple case studies are more applicable when many actors are involved and the subject matter is complex. Vinogradov notes in his dissertation studying immigrant entrepreneurship in Norway that '[it] is a complex multidimensional phenomenon which unfolds on individual, firm-, industry- group-, national and international levels' (Vinogradov, 2008, p. 20). This paper focuses on the individual and group levels.

In order to clarify the dynamics of ethnic entrepreneurships, the study focuses on the three suburbs of Helsinki: Kontula, Puotinharju and Malmi. In the paper we examine where in the Helsinki Metropolitan Area "bazaars" are forming, and which is the mechanisms of how these retail spaces come to use for ethnic (and local Finnish) groups.



(Img 1), Puotinharju shopping centre designed by architect Erkki Karvinen, 1965



(Img 2) Puhos by Ramon Maronier for Lähiöfest, 2018



(Img 3) Puhos by Ramon Maronier for Lähiöfest, 2018

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Hollmén, Saija

ORAL&PAPER Presentation



Saija Hollmén is the Vice Dean for Art and Creative Practices at Aalto School of Arts, Design and Architecture. She is a co-founder of the interdisciplinary Aalto WiTLAB (Aalto World in Transition Research LAB), which focuses on global sustainability and humanitarian development. She is responsible of the *Interplay of Cultures* program, based at the Department of Architecture, dealing with architectural design and planning in cultures outside Europe. Hollmén is a co-founder of Hollmén Reuter Sandman Architects and Ukumbi NGO, which aims at providing architectural services for communities in need. Ukumbi has projects in several African countries, seeking to improve the lives of the less privileged. Their work has been widely exhibited, e.g, in the Venice Biennale in 2002, 2004 and 2016. Ukumbi was also awarded the Finnish State Award for Art in 2009 for its work for culturally sensitive and respectful architecture.

Architecture of a Place - Cross-cultural perspectives to architectural design

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Summary

Cross-cultural psychology explores other cultures in order to discover cultural and psychological variation, which are not present in our own limited cultural experience. It studies the variations in human behavior, taking into account the ways in which behavior is influenced by cultural context, including dissimilarities in conceptions of space.

By looking at example projects by Hollmén Reuter Sandman Architects, this paper explores the cultural variables and features that affect local architecture, and discusses the importance of understanding cultural differences in architectural practice from the point of view of cross-cultural psychology and critical regionalism. The research presents common denominators, which are essential to architectural design in a foreign cultural context.

keywords: cultural variations, cross-cultural psychology, critical regionalism

Abstract

Recognizing cultural variables as determining factors of architectural design is becoming more and more important in our era of globalization, as we face extreme situations due to conflicts and natural disasters. Now more than ever, it is important to consider the background and cultural habits of the people affected. Furthermore, architects need to go beyond styles and -isms, when developing new strategies to facilitate reconstruction of built environments for people in need. The evolution of the profession of architect has brought us to this moment, when it is no longer satisfying to perform a design task out of its cultural context.

The basic assumption of my research is that architecture, as any other form of art, is a reflection of local culture. How people conceive of and use space is not the same everywhere: it depends on the climate, on social and gender relations within the community, on religion, customs, taboos and cultural habits, as well as the prevailing political and economic models and realities. Architecture is a projection of all these issues; it reflects the human conditions of a certain society and community.

Cross-cultural psychology explores other cultures in order to discover cultural and psychological variation, which are not present in our own limited cultural experience. It studies the variations in human behavior, taking into account the ways in which behavior is influenced by cultural context, including dissimilarities in conceptions of space.

Rules that apply to ways of communication in a cultural context are learnt very early, and they seem to persist. Cross-cultural psychology explores other cultures in order to discover cultural and psychological variation, which are not present in our own limited cultural experience (Berry and Dasen, 1974). It studies the variations in human behavior, taking into account the ways in which behavior is influenced by cultural context (Berry, 2002:1). Moreover, cross-cultural psychology is concerned not only with diversity, but also with uniformity: what is there that might be psychologically common or universal in the human species (Lonner, 1980). In other words: "cross-cultural psychology studies the similarities and differences in individual psychological functioning in various cultural and ethno-cultural groups; the relationship between psychological variables and socio-cultural, ecological and biological variables; and the ongoing changes in these variables." (Berry, 2002:3). It is important to note that when examining these cultural variables, we tend to start with the assumptions common to our own culture, which might not be sensitive in discovering the phenomena important in another culture (Berry, 2002:1). It is difficult to avoid ethnocentrism, which prohibits us from seeing beyond our own presumptions. Disciplines like cross-cultural psychology, anthropology and sociology aim at reducing ethnocentrism by recognizing the limitations of our current knowledge and thinking.

We can safely presume that there exists certain general and "universal laws" in human behavior, manifested and well established in disciplines like sociology, linguistics and anthropology. However, as much as there are universal features in human behavior that make us the species we are, there are differences in how we perceive the world, dictated by our indigenous culture. Anthropologists believe that human phenomena are sensitive to context, "may they be situational, social or cultural." (Edgerton, 1974:63-64). One of these context sensitive human phenomena is the conception of space - public or private - and how people organize their habitat and build environment. Often this is affected and blurred by global influences, but some features of indigenous ways always remain for closer study and observation.

This paper explores the cultural variables and features that affect local architecture, and discusses the importance of understanding cultural differences in architectural practice from the point of view of cross-cultural psychology and critical regionalism. A literature review looks into the thinking and writings of Lewis Mumford, Liane Lefaivre and Alexander Tzonis.

The research is based on written material produced during the design and construction of four projects by Hollmén Reuter Sandman Architects, namely the Women's Centre in Rufisque, Senegal (completed in 2001), The APE Learning Centre in Cairo, Egypt (designed in 2011), the KWIECO Shelter House in Moshi, Tanzania (1st phase completed in 2015), and the Nyang'oro Secondary School Hostel in Iringa, Tanzania (2018). The data consists of an extensive ethnographic collection of travel logbooks and field memos, in which the phases of the projects are documented in written form. The analysis of the data aims at revealing cultural aspects, common denominators and relations that determine spatial arrangements and the way people use spaces in different cultural contexts, as well as cultural features affecting the design profession and building processes.

Thematic questions are: "What are the determining factors of local architecture? What makes architecture identifiable to a certain group of people, and how much does a building need to bear resemblances to local building traditions, in order to do so? By what means do we engage a community to participate in an architectural project, and how is the community initiative turned into a sustainable and successful development?"

My research reveals the particular features one needs to take into consideration, when designing a building in a certain cultural environment, other than one's own, and what factors of the local culture one needs to acknowledge, in order to conceive of and root a building project into the community. By comparing the

identified cultural issues and variables found in some cultures, the research presents those common denominators, which are essential to architectural design in a foreign cultural context. The findings and essential features of the insights gained in the studied contexts are applicable in certain ways to various other low resource or indigenous contexts as well.

The research helps to deepen the knowledge base of architectural practices and broadens the perspectives of the profession in relation to foreign cultures. It may reduce ethnocentrism and help us to strive toward more empathetic approaches in architectural design.

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**Extended Abstracts for
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Becker, Edward

POSTER Presentation



Edward Becker, Architect SAFA, is a tenure-track Assistant Professor of Architecture at Virginia Tech and co-founder of the architectural practice VÖR (www.vorarchitecture.eu). Prof. Becker's research focuses on the intersection of biomaterials with digital technologies. He holds a Master of Architecture with Distinction from Harvard University and has held research and teaching positions

Networked technologies and sustainable biomaterials for enhanced urban environments

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Summary

As high-performance digital tools become increasingly accessible to the general public due to a reduction in purchasing cost and simplified learning curves, how do these tools and their related open-source frameworks impact the way architects approach the design of singular buildings and networked urban systems alike? This early stage research focuses on the use of accessible digital tools and upcycled bio-based materials to explore the aforementioned question. Two single-family residential projects serve as case studies. Both projects explore how networked, open-source technologies can be paired with 'advanced' biomaterials to promote urban self-sustenance, a reduction in carbon emissions, and other related benefits.

Keywords: digital technology, biomaterials, networked technology

Extended Abstract

Introduction

Technologies such as aerial drones, 3D printers, 3D scanners, and CNC mills have migrated into mainstream consumer culture with mass production driving down costs and supporting the development of user friendly digital interfaces. Such advances have allowed technologies that were previously out of reach for non-professionals to be utilized by an increasingly wide spectrum of the general populous. Such an accessibility of digital tools – tools that often utilize open-source core software or open-source software plugins – is an opportunity for architects to re-consider how singular buildings can operate within larger networked systems. Just as the historic development of electrical grids and sewer systems linked singular buildings into holistic urban infrastructural networks, so too can accessible digital tools open new opportunities to link the singular to the collective, spurring a multitude of new conceptions about design and performance. If open-source data can be used to program commercially accessible drones into collective bodies or manufacture high-performance biomaterials from low-value, accessible wood stock, how can this change the way architects think about the design of spatial systems?

This research explores the potential for accessible digital tools and open-source technologies – when paired with advanced biomaterials – to enhance urban environments by reducing carbon emissions, increasing urban quality of life, and increasing urban self-sustenance in housing design, among other benefits. The practice-based research uses two ongoing housing projects as professional practice case studies. House 1 (Finland) and House 2 (United States) showcase how accessible digital tools can be utilized in different ways to enhance the built environment and illustrate the diverse possibilities for how such digital tools can alter the conceptualization and actualization of our collective built environment.

Methods

House 1 (Finland):

House 1 explores how accessible digital tools can alter the methods by which architects and clients interact, thus changing the spatial implications of design. The project – currently in schematic design – proposes that open-source digital tools such as a Maslow CNC (approx. 400 euro) and Phantom drones (approx. 900 euro) are programmed to mutually benefit the design and construction process. Where the Maslow CNC can quickly and precisely cut plywood and assembly jigs with pre-developed cut patterns designed by the architect, the client/contractor can manufacture the wall systems for light-frame construction on site in a straightforward manner. Due to the embedded intelligence present in the cut files, the client/contractor can construct intricate wall geometries with relative ease, a possibility that was previously infeasible before the availability of this technology. The light-frame wall construction can change from orthogonal geometries to curvaceous geometries with little to no effort, each lightframe wall module cleanly and effectively linking into the next due to the cut file precision. Cut files can be downloaded on site through the cloud and the translation of cut data can be handled seamlessly by the tools themselves. Ubiquitous orthogonal geometries typically present in residential construction can be diversified and self-build clients can be supported with embedded intelligence designed into the construction process by the architect. Commercially accessible Phantom drones can be networked together to support the construction process or harvest food for the construction crew from nearby fields.

House 2 (United States):

House 2 challenges the typical single-family home to do more. Unlike the traditional single family home that relies solely on the purchase of commercially available food from an external entity and exists independently of surrounding homes in terms of any shared collective intelligence, House 2 uses accessible digital tools to open new possibilities for the single-family home to become self-sustaining through the lens of food consumption and a valuable player in collective resource-distribution systems that benefit both the individual and community alike. Commercially accessible drones have been proven to liberate vertical facades for a greater variety of uses than were previously possible. Additionally, such digital tools can also be networked into collectives that provide compounding benefits as the amount of entities increase. House 2 proposes that urban gardens can exist on facades, thereby occupying previously unused space, and drones can harvest food items that have value within shared economies. As multiple homes become linked through a network of harvesting, sharing/selling, and consumption, communities become more resilient with less reliance on outside entities. Such a sharing of food resources among communities through networked drones also challenges architects to consider the design, construction, and urban implications of buildings that behave as clusters rather than singular entities.

In both house designs, open-source information can also support the manufacturing of structural components comprised of ‘advanced’ biomaterials sourced from surrounding areas. This practice-based research strives to construct housing that leverages bio-materials and networked technologies for more progressive urban life while supporting the relevancy of design for non-expert production.

Results / Analysis

Initial numerical analysis indicates that the housing designs are carbon negative, affordable (location specific), and increase self-sustenance via on-site food production. Other design metrics can be further assessed following prototyping and construction completion.

Discussion

The research is timely and relevant due to the recent developments in open-source, networked technologies and advanced biomaterials, as well as the increased accessibility of high-performance digital tools. The projects are intended to raise questions about the future of networked systems, the conceptualization of ‘hardware’ and ‘software’ for urban environments, and the proliferation potential for technologically advanced projects attuned to their local environments.

Kajaste, Helmi

POSTER Presentation



Helmi Kajaste (b. 1986) is a Helsinki-based architect and artist. She graduated in 2013 from Aalto University, School of Arts and Design, Department of Architecture. Her master's thesis dealt with architecture and film and she has continued her research in this field after graduation. Currently she is a doctoral student at Aalto University. In addition to her research, Kajaste works on a book about architecture and film and makes music and short films."

You see a lock anywhere? - the boundaries between inside and outside in the architecture of films

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Summary

Architecture creates boundaries between inside and outside, between private and public spaces. Creating boundaries can be seen as one of the main functions of architecture and is a pivotal topic of design. To learn more of the nature of different boundaries, privacy and the act of creating a boundary we can look at how they are presented in films. Film as an art form has special ability to show the inner world of fears and fantasies simultaneously and in contrast with the world outside. We ask how spatial and mental boundaries are presented in films and what does it mean to cross these boundaries. The films chosen as case studies focus on the spaces of everyday domestic spaces, traditionally often associated with women. The study analyses the way in each film the space is created with architectural and cinematic means. The shift of interest from public to private life also suggests a shift in perspective regarding the architectural design process to start from the inside and proceed outwards.

Keywords: *architecture, film, private, public, inside, outside, boundaries*

Extended Abstract

1. Introduction

One of the key functions of architecture is making a shelter from the elements. The protection of a shelter is a basic need, but shelters also create order by articulating a form out of formlessness. Architectural boundaries separate and arrange spaces and places. The order created by boundaries implies classification of elements and things having their proper place. Crossing these boundaries can be seen as a threat to the order and as the anthropologist Mary Douglas famously stated "dirt is matter out of place" (Douglas 2002). Food on the table is not dirt, but food on the floor is. Arranging spaces is also about power and control. The ownership of a space affects how people act in it. Previously the public outside spaces have not been as open

to women as they are to men. Even though boundaries can be obscure and invisible they have been more detectable for women.

The architecture in films that is most often noticed and written about is one that is visually striking and futuristic. It is often the architecture of business, skyscrapers and public spaces, a world that has been traditionally seen as a very masculine one. Less attention has been put to the everyday architecture of domestic spaces, those that have been traditionally associated with women. Some filmmakers have with their work questioned the society's ideas of whose stories are being told or considered interesting. The nature of boundaries of a domestic space can vary. Home can be a shelter or a prison, depending on the meaning of its boundaries.

2. Research questions

The research questions are: How are boundaries between private and public, inside and outside presented in the architecture in films? What does it mean to cross these boundaries? In whose space are we in the films and how does the ownership affect the characters and the viewer?

The aim is to study the use of architectural boundaries, their nature and the crossings of these boundaries. How are boundaries created? Are they clearly detectable and how, or are they blurry or gradual? What do the boundaries divide? Is there a separation of ownership and does that affect the behaviour of the characters? What are the border crossings like and how do people transition from one space to another?

3. Aim and Methods

Even though we look at architecture in films and not in real life the purpose of this study isn't to simply study set design. The aim is to contribute to the study of the nature and meaning of architectural boundaries. Architects create these physical and mental boundaries everyday for the real world and the meaning of these gestures isn't always sufficiently contemplated. Studying architecture through film is useful, because films are globally available for viewing and experiencing. Also the contents of a film stay unchanged (even if the perspective of the viewer changes). "Movies are part of discursive and social practices. They reflect the conditions and structures of society and of individual life," Mikos (2014, p.409) highlights.

The study is conducted by looking into a few case study films in which homes and boundaries of privacy have been set up. Many of the films chosen as case studies focus on everyday private living spaces. One of the case study films is *Jeanne Dielman, 23 Quai du Commerce, 1080 Bruxelles* (1975) by the Belgian avant-garde filmmaker Chantal Akerman. This film has gained reputation as one of the most important feminist films of the 1970's and as a landmark film of hyperrealism and slow cinema. It largely deals with containment and order and is set in an ordinary apartment. Suitable pairing to Akerman's film comes from Roman Polanski's psychological horror film *Repulsion* (1965), featuring a woman confined in an apartment and fearing the outside world of 1960's London. In addition to these confined apartments the study explores settings with invisible boundaries. Aki Kaurismäki's film *Man Without a Past* (2002) deals with memory loss, homelessness and carving one's space from the shapeless. Another film which creates very clear spatial and emotional boundaries from nothing is Lars von Trier's *Dogville* (2003). It doesn't have any walls in it, but is a very telling example of privacy and the nature of architectural boundaries.

The study analyses the way in each film the space is created with architectural and cinematic means. Structured microanalysis studies the films scene-by-scene looking for patterns with the research questions in mind.

4. Conclusions

This research is just in its beginning stages and formatting the most effective research questions and methods for this particular study are still under construction. The case study film selection is also still to be confirmed. The aim of this research is to contribute to the study of architecture through cinema and give both disciplines new perspectives in the use of their tools. In architectural theory the study brings forth the shift of interest from public to private life which also suggests a shift regarding the architectural design process to start from the inside and proceed outwards.

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Kalakoski, Iida & Thorgrimsdottir, Sigrun Hanna

POSTER Presentation



Iida Kalakoski is a PhD candidate and a university teacher in Tampere University of Technology, School of Architecture, in the field of architectural history. Currently Kalakoski works as a senior architect in Finnish Heritage Agency (Museovirasto). Her ongoing research handles the themes of materiality, permanence and change in the context of wooden heritage. Her research interests also include heritage processes and interpretations of built heritage.

Sigrun Hanna Thorgrimsdottir is a PhD candidate at the department of Conservation at the University of Gothenburg. Sigrun studies alternative understandings of buildings-as-heritage in the Anthropocene in the context of everyday life and homeowners who care for old houses and the environment. The study is part of the research project Maintenance Matters: Exploring common contexts of heritage (e)valuation, funded by the Swedish Research Council.

Aesthetics of the Secondary: Scandinavian Interpretations of the “Converted Barn”

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Summary

This study aims at understanding the aesthetics and ethics of architectural transformation and adaptive reuse through Scandinavian examples of “barn conversions”. Our study on adaptive reuse combines theories and approaches from architectural conservation, heritage management and architectural theories. We have identified and presented six levels of application, from adaptive reuse to inspiration, where an actual barn or an *idea of a barn* is transformed to a contemporary house.

Keywords: *Material reuse, relocation, reconstruction, reinterpretation, conversion, authenticity, regionalism*

Extended Abstract

This study is an examination of a rather unique branch of architectural field: the adaptive reuse of former secondary buildings, *uthus*, as residential buildings in contemporary Scandinavia. As marginal as it might seem, the “barn conversion” is a globally significant home decoration and refurbishment trend, which also has impacts on contemporary housing architecture. The focus is on the various mediations and transformations of tradition and continuity, of heritage and contemporary architecture. Furthermore, we seek to understand the aesthetics and ethics of the reuse and account for different kinds of handling ‘pastness’ and history. We study both: the architect’s engagement with these secondary buildings and homeowners’ interest in living with them.

The adaptive reuse, and other comparable forms of exploitation of the existing building stock, are practices that are situated somewhere between the architectural conservation, heritage management, and

architectural theories. The aim of the study is to analyze expressions of regionalism, vernacularism and historicity in this context and explore how heritage, existing material and traditional skills find their way into contemporary architecture. And vice versa: how can this practice of using material, forms and skills from the past in architecture, bring us to an alternative understanding of heritage and its purpose. (Jones, S. & Yarrow, T. 2013, Özkan, S. 1985)

Vernacular architecture refers to various traditional buildings with regional characteristics. Vernacular architecture fits specific purposes and a way of life: housing and protecting humans, animals and crop. These buildings take on a local form according to the structures of society and its modes of production, environmental conditions and so on. They have always been subject to change and affected by time passing, the weather, the landscape and various adaptations that happen according to new needs and cultural context. Change is integrated in the concept of the vernacular. Vernacular architecture is built following methods and traditions inherited from previous generations, but adapted to current conditions. While the traditional is often considered as something that stays the same, something that is not original, it is, with closer inspection, very adaptive and demands creativity. Within the discourse of heritage, conservation of the built environment often aims at protecting an authentic or original state of the building. We opt for an understanding of heritage that takes for granted that heritage is a dynamic process as Harvey (2001) suggests, one that involves the entanglement of various actors, human and non-human and is mindful of change and adaptations that happen over time.

The methodological approach is experimental. This is an ethnological exploration combined with architectural analysis. By using qualitative methods, we conduct site and building analysis and deep, semi-structured interviews with both, the architects and the owners of the selected reuse projects.

The cases

We have analysed examples of barn conversions or barn-inspired residential buildings in Scandinavia. We have classified them based on their materiality and location. The categories are characterized shortly below, and they will be further studied and visualized in our posters.

- 1) Adaptive reuse. The first case is the application, where an existing barn is converted to a house in its original location. The existing material is used, mainly in its original composition, with new additions.
- 2) Material reuse at the original location. The original building has gone through major changes in its original location. Some of the original materials are reused in the new building.
- 3) Reuse and relocation. The original building is relocated and transformed into a new building.
- 4) Reconstruction. A new *barn-inspired* house is built to a building site of a previously existed barn.
- 5) Reinterpretation. A new *barn-inspired* house is built using traditional building methods and materials to a rural landscape.
- 6) Inspiration. A new *barn-inspired* house (possibly prefabricated) is built using new building methods.

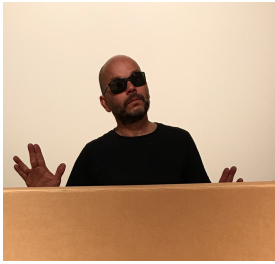
This is a work-in-progress. The poster presents the preliminary case studies and investigations into the entanglements of heritage and architecture, the contemporary and traditional through photographs, quotes and figures. The poster includes schemes and matrixes to present the selection, classification and analysis of the project descriptions provided by the architects and other material. With short text paragraphs, we relate the study to theoretical literature and elaborate questions and ideas for further explorations.

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Lima, Fabio

POSTER Presentation



Fabio Jose Martins de Lima is an architect and professor at the Federal University of Juiz de Fora (UFJF), Brazil. Since 1994 he has been linked to a research on the cities' history in the state of Minas Gerais, Brazil. In 2011 and 2012 developed a Postdoc Internship at *Università IUAV di Venezia*, sponsored by CAPES. This research approach is linked on the activities of the research group "*Urbanismo em Minas Gerais*" based on FAUUFJF with support of CAPES, CNPQ, FAPEMIG. CV : <<http://lattes.cnpq.br/8637271768339853>>

Thinking and Practices on Urban Planning in Minas Gerais State, Brazil: a Necessary Review

Fabio Jose Martins de Lima

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Abstract

The article approaches the thinking and the practices of urbanism and urban planning in Minas Gerais State, Brazil, during the period between 1950 and 1970, alongside the repercussions of the military *coup d'état* in 1964, and what was proposed for the cities, as well as for technicians' performances. In this period we had the production of papers and the diffusion of ideas which allowed a greater theoretical background for technicians. As an inflection point, in the middle of this period, 1964's military coup d'état, which consolidated the restriction of democracy, already underway in the country, since the beginning of the 1960s, had directly interfered with professional and academic activities. Written with grant funds from CAPES, CNPq and FAPEMIG.

Keywords: Urbanism, Urban Planning, City's History, Minas Gerais

Extended Abstract

The paper explores the thinking and the practices of urban planning in Minas Gerais State, Brazil, during the period between 1950 and 1970, alongside the repercussions of the military cup in 1964. The emphasis is the performance of professionals in what was proposed to cities, how these procedures were radiated inland, through what was done in Belo Horizonte, Minas Gerais' modern Capital, that, in this period, had its urban problems multiplied. The appeal to professionals linked to the disciplinary fields of architecture and engineering was recurrent, both at the municipal and state levels, with the progressive institutionalization of planning actions.¹ Most of the practicing professionals had graduated at the School of Architecture of the Federal University of Minas Gerais. In addition, the presence of qualified professionals from the Sanitary Engineering course at the School of Engineering, had also significant importance, as well as other technicians from other locals and fields.² The purpose of this article is to discuss the comparative analysis by explaining the procedures adopted in terms of the urban planning theories and practices in Minas Gerais, Brazil. In this process, references to the proposals in this thematic field were intrinsically related to the ideas of the Modern Movement, linked to the ideas disseminated by the

¹ LEME, Maria Cristina da Silva (org.). **Urbanismo no Brasil: 1895-1965**. São Paulo: Studio Nobel; FAUUSP; FUPAM, 1999, p. 20-21.

² About the School of Architecture of UFMG, see: GOMES, Marco A. A. de F.; LIMA, Fabio J. M. de. *Pensamento e prática urbanística em Belo Horizonte: 1895-1961*. In: LEME, 1999. p. 126. About the School of Engineering of UFMG, see: <<http://www.desa.ufmg.br/o-departamento/historia-do-des/>>. Access : Abr., 5, 2018.

International Congress of Modern Architecture - CIAM's, and other aspects of thought, particularly related to the Cities Gardens' Movement, disseminated by Ebenezer Howard. In 1950, the course of urbanism in the School of Architecture, created the possibility of a greater specialization in this thematic field.³ At the beginning of the course, the production of papers and the dissemination of ideas related to urban planning, which allowed a greater theoretical basis for technicians. To the range of urban proposals, this partially realized, or even not implemented, were added debates and publications, that reinforced the importance of the architects and the engineers for the construction of a modern city. Thus, the trajectory of the technicians revealed an intense performance, that established links at the university, in the public administration, and also with professional practice, in the private sphere, through offices of engineering and architecture. As a turning point, in 1964, the military *coup d'état* consolidated the restriction of freedom, already in the country, and interfered directly in the professional and academic daily life. In this period, the consolidation of a process that dates back to the beginning of the 20th century, with the institutionalization of urban planning, related to the government, at the state and municipal levels, particularly in Belo Horizonte. The materialization of the planners' ideas took place through urban proposals elaborated by the professionals, in the public administration or in offices of architecture and engineering. The proposals were implemented in Belo Horizonte and also in the cities of the interior of the state.

The methodology includes a recurrence to the history of the cities with an historical approach to the knowledge of the planners' vision, particularly the strategies to deal the problems facing urban planning. At the same time, allows a comprehension about the complexity that is part of the historical process of growth cities. It is worth mentioning that *"... the use of biography reveals itself as a strong narrative expedient: to suggest a unity and at the same time, emphasize the dissolution of coherent identity of a person in the relationship established with the group to which it belongs, or even what this represents in terms of practice or social circle (and cultural). The reconstruction of the life of an individual interest as a study of a network of personal relationships, or also only as restitution about lines of planning thoughts that circulate around the character and interfere with your stance. In short, this approach is put forward as a pretext for the simultaneous construction of many more stories and intellectual trajectories irreducible to a single record."*⁴ The questions focused on several moments that characterise the cities growth should be thought in the context of space and time in which they are linked. The crucial question to study the history of cities that arises in the beginning, according to Zucconi, is to interrogate *"... where and when?"*. And also according to Calabi should be considered *"... a series of tools and strategies of interpretation"* in the time duration and on its own chronology, with the aim of understanding the specific moments of change.⁵ The time, is considered as a source of change and permanence, as well. For the history of the cities, and in particular to the urban planning's history, this stands as a variable key and a major theoretical issue, each moment can be understood as the synthesis of the times that it converges.⁶ The questions related to this approach, for discussion, would be the following:

1. How to think about ways to urban planning nowadays, taking into account the participatory process, considering the current management difficulties ?
2. Considering the historical process of planning, particularly in Minas Gerais, Brazil, which lessons can we draw ?
3. Thinking on the comparative analysis, which references can be sought in the planning's experiences in Finland ?

The focus on specific horizons as a part of the historical perspective of non linear analysis, ie, the facts do not think a timeline linked in an evolutionary way. At the same time, we do not intent to exhaust the possibilities of approaching the topic and its related issues. This approach also considers the background

³ LIMA, Fabio J. M. de; GOMES, Marco A. A. de F. Arquitetos e urbanistas: cidade e formação profissional no Brasil (1900-1960). In: FREITAS, José F. B. (Org.). **Diálogos: Urbanismo.br**. Vitória/ES: EDUFES; Niterói/RJ: EDUFF, 2010

⁴ CALABI, D. **Parigi anni venti : Marcel pöete e le origini della storia urbana**. Venezia: Marsilio editori, 1997, p.10.

⁵ See, among others: ZUCCONI, G. and CALABI, D., lecture notes of IUAV courses on Storia della Città.

⁶ FERNANDES, A. & GOMES, M. A. A. de F. A pesquisa recente em história urbana no Brasil: percursos e questões. In: PADILHA, N. (org.). **Cidade e Urbanismo: história, teorias e práticas**. Salvador: Mestrado em Arquitetura e Urbanismo da FAUFBa, 1998, pp.13-28.

analysis as a tool for historical knowledge, some more specific, others more general, with its possible consequences. Finally, it is worth mentioning that the study on the process of growth cities and the personal planners trajectories do not intent to search solutions to the current urban problems, on the contrary, the aims is to comprehend what was done and thought to the cities.

The results related to this approach, would be the following:

1. The first result is a book explaining the history of urban planning in Minas Gerais with the title of the paper: *Thinking and practices of urban planning in Minas Gerais State, Brazil: a necessary review*;
2. Other possible results is to put into discussion what was done to the cities, by the planners, and to think the future of urban planning;
3. Another research results is the to be able to continue cooperation, in the international academic horizons, particularly with the Aalto University with the The School of Arts, Design and Architecture.

Thus, the perspective of comparative approach to focus on the history of the cities and in particular on the history of urbanism is placed in a relevant way in order to continue the studies about the growth cities process and about planners trajectories, particularly in Minas Gerais, Brazil.

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Sankala, Iina, Karppi, Ilari & Vakkuri, Jarmo

POSTER Presentation



Iina Sankala on hallintotieteiden maisteri ympäristöpolitiikan ja aluetieteen pääaineesta. Hän työskentelee tutkijana Tampereen yliopiston johtamiskorkeakoulussa osana BEMINE-hanketta, jossa hän tarkastelee kaupunkien ja kaupunkiseutujen strategista maankäyttöä sekä kestävästä kaupunkikehittämisestä. Kaupungistumisen, kestävästä liikkumisen ja kasvun hallinnan kysymykset ovat olleet hänen kiinnostuksen kohteita niin työssä kuin opinnoissakin.



Ilari Karppi on aluetieteen dosentti ja yliopistonlehtori Tampereen yliopiston johtamiskorkeakoulussa. Hänen tutkimusintressinsä kytkeytyvät fiksun urbanisaation eri tekijöihin ja niiden integrointiin, kestävästä yhdyskuntakehittämisestä sekä sen edellyttämään suunnitteluun ja päätöksentekoon osana kuntien ja kaupunkiseutujen johtamista. BEMINE-hankkeessa hän tarkastelee yhdyskuntakehittämisen teknis-materiaalista perustaa, erityisesti suunnittelun käytäntöjä muokkaavia välineitä ja menettelytapoja.



Jarmo Vakkuri toimii kunnallistalouden professorina ja julkisen talousjohtamisen tutkimusryhmän johtajana Tampereen yliopiston johtamiskorkeakoulussa. Vakkuri toimii BEMINE-konsortion osahankkeen johtajana. Hänen tutkimusintressinsä liittyvät mm. julkisen talouden rakennemuutoksiin, julkisten palvelujen tuloksellisuuteen, kestävästä kaupunkitalouden ymmärtämiseen sekä hybridiohjausjärjestelmien hallinnan ongelmiin. BEMINE-hankkeessa hän keskittyy taloudellisen päätöksenteon ongelmaan tulevaisuuden kaupunkisuunnittelussa.

Raitiotie rakentaa kaupunkia: megaluokan infrahankkeet kaupunkikehittämisessä

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Tiivistelmä

Toimiva kaupunkiympäristö on yksi hyvinvointia edistävän elämän rakennusaineista. Liikkumisen helppous on puolestaan osa kaupungin toimivuutta. Tampereen raitiotien kaltaiset saavutettavuutta parantavat raidehankkeet ovat esimerkkejä investointivetoisesta kaupunkikehittämisestä. Jotta suuren mittaluokan hankkeilla olisi potentiaalia toimia strategisina yhdyskuntakehittämisen välineinä, niitä ei tule tarkastella yksin liikennettä palvelevina järjestelminä. Olennaista on hankkeiden kytkeminen ympäröivään kaupunkirakenteeseen ja sen toimintoihin. Tampereella raitiotie näyttäytyykin merkittävän joukkoliikennehankkeen ohella keinona hallita kasvua ja edistää kaupunkirakenteen kestävyttä. Osana kaupunkiseudun yhteistyötä raitiotien ylikunnalliset jatkeet edellyttävät kuntien yhteistä sopimista keskeisissä kehittämiskysymyksissä. Kuntapäätäjien onkin kyettävä ylittämään hallinto- ja kuntarajoja sekä tunnistettava raidejärjestelmään sitoutumisen mittaluokka ja aikajänne. Kapean sektorilähtöisen tarkastelun sijaan tämä edellyttää kaupunkisuunnittelulta kokonaisvaltaisempaa näkökulmaa.

Avainsanat: urbaani raideliikenne, yhdyskuntarakenne, kaupunkikehittäminen, strateginen suunnittelu

Abstract

Well-functioning urban environment and a high level of mobility are both components of perceived life-quality. Tampere light rail project is a mega-investment that serves strategic mobility, functionality and sustainability goals. This system crosses municipal boundaries and constitutes a new arena of cooperation for smart growth. This requires tools for the neighboring municipalities to work on questions related to land use, housing and traffic. The governance challenge here is to understand the regional scale and extensive time span of the commitments that the planning and implementation of such investment scheme requires. An integrative approach in decision-making and planning is needed.

Keywords: light rail transit, urban development, strategic mobility planning

Extended Abstract

Johdanto

Kaupunkiympäristöjen laatu on noussut merkittäväksi kilpailutekijäksi houkutellessa korkeasti koulutettuja osaajia (Østbye ym., 2017). Yhtä lailla kaupunkeja velvoittavat tänä päivänä erilaiset päästö- ja energiansäästötavoitteet. Pohjoismaiset kaupungit sijoittuvat vuodesta toiseen kärkisijoille erilaisissa elämänlaatu- ja kestävyysvertailuissa, sillä niissä toimiva kaupunkiympäristö on nähty yhtenä hyvän elämän rakennusaineista. Liikkumisen helppous on puolestaan osa toimivuutta. Tämän vuoksi monet kaupungit ja kaupunkiseudut ovat 1980-luvulta lähtien rakentaneet uutta urbaania raideliikennettä. Suomalaisia esimerkkejä ovat pääkaupunkiseudun raidehankkeet sekä rakenteilla oleva Tampereen raitiotie.

Näissä saavutettavuutta parantavissa hankkeissa on samanaikaisesti kyse megaluokan investoinneista kaupungin kehitykseen tai suoranaisesta investointivetoisesta kaupunkikehittämisestä. Tämän vuoksi niitä ei tule tarkastella yksin liikennettä palvelevina järjestelminä. Tarkastelemme Tampereen raitiotiehanketta esimerkkinä kaupunkikehittämisen suurhankkeista. Sitä voidaan pitää materiaalisena, hallinnon eri sektoreiden huomiota vaativana artefaktina. Tampereella raitiotie on jo vaikuttanut merkittävästi maankäyttöpäätöksiin ja niiden toimeenpanoon. Sen merkitystä korostaa rakenteiden ajallinen pysyvyys kaupunkitilassa: vaikutukset ympäröivään kaupunkiin ja sen toimintoihin ulottuvat vuosikymmenien ja -satojen päähän.

Tarkastelua pohjustavat tutkimuslausekkeet viime vuosikymmeninä toteutettujen raitiotiehankkeiden kaupunkikehitysvaikutuksista. Empiirinen tutkimusasetelma rakentuu suunnittelu- ja päätöksentekodokumenttien sekä Tampereen kaupungin ylimmän ja keskijohdon sekä kokeneen suunnittelijakunnan keskuudesta kerätyn fokusryhmä- ja haastatteluaineiston varaan. Olemme haastatelleet myös raitiotien reitin varrella toimivia yrittäjiä. Tutkimusta on tehty osana Suomen Akatemian STN-rahoitteista BEMINE-hanketta (*Beyond MALPE-coordination: Integrative Envisioning*, 2016-2019) sekä aiemmissa vaiheissa osana VNK-rahoitteista Maankäyttö, asuminen ja kestävä julkinen talous (JULMA) -tutkimushanketta sekä Tampereen kaupungin raitiotien vaikutusten sekä sen rakentamisvaiheen yritysvaikutusten arviointia.

TOD – Joukkoliikenneorientoitunutta kaupunkia kehittämässä

Kaupunkisuunnittelussa tavoitteet kestävydestä, elinvoimaisuudesta ja hyvinvointia tukevasta elinympäristöstä pyritään saavuttamaan erilaisilla yhdyskuntarakenteellisilla ratkaisuilla. Kaupunkien toiminnallinen eriytyminen on nähty merkittävänä kestävyyshaasteena. *Transit-oriented development* (TOD) on globaalisti levinnyt suunnitteluperiaate, jolla tuetaan kaupunkimaisen tiivistä yhdyskuntarakennetta sekä kävelyä ja pyöräilyä osana joukkoliikenteen käyttöä (Calthorpe, 1993). Usein sen keskeisiin tavoitteisiin kuuluu myös kohtuuhintaisesta asuntotarjonnasta huolehtiminen. Samalla haastetaan henkilöautoriippuvuutta etenkin kaupunkiseutujen ytimissä. Tämä edellyttää maankäytön ja liikenteen suunnittelun integrointia.

Monissa kaupungeissa kaupunkiraitiotiejärjestelmät (*light rail transit*, LRT) ovat nousseet suosituiksi kehitettäessä alueen joukkoliikennejärjestelmää hyvin palvelevaksi verkostoksi, jolla on vahva runkolinja (Olesen & Lassen, 2016). Niiden avulla on myös pyritty eheyttämään toiminnallisesti eriytyneitä alueita ja tukemaan kaupungin fiksua kasvua (*smart growth*, Puustinen, Mäntysalo & Karppi, 2016). Käveltävyys ja joukkoliikenteen hyvä saavutettavuus ovat arvostettuja elinympäristön piirteitä, mikä tekee raideliikenteeseen tukeutuvista TOD-alueista haluttuja asuin- ja työpaikkoja (Noland ym., 2017). Julkisen toimijan ohjausta vaaditaan kuitenkin tilanteissa, joissa reitin varren houkuttelevuus synnyttää uhan yhdyskuntarakenteen yksipuolistumisesta tai sosiaalisesta eriytymisestä.

Kukin kaupunki on suunnitteluympäristönä ainutlaatuinen, jolloin myös TOD-hankkeet muotoutuvat paikka- ja tapauskohtaisesti. Niissä joudutaan toisaalta kohtaamaan samaa kompleksisuutta kuin muussakin kaupunkikehittämisessä; asiat eivät tapahdu irrallaan toisistaan, vaan seurauksena lukuisista ristikkäisistä kytkennöistä. LRT-järjestelmät järeänä infrana ovat materiaallinen väline (*thing*, Beauregard, 2015a; 2015b) järjestää tätä kompleksisuutta pitkän aikavälin ennakoitavuutta tuottavalla tavalla. Siten LRT-järjestelmille annetaan helposti strategisempi rooli kuin niille vaihtoehtoisiksi esitetyille BRT-järjestelmille (*bus rapid transit*). Tämä piirre tuo ne osaksi monimutkaisia päätöksentekoprosesseja, joissa on läsnä eri toimijoita, intressejä ja institutionaalisia esteitä (Staricco & Vitale Brovarone, 2018).

Tampereen raitiotie ohjaa kaupungin fiksua kasvua

Tampereella raitiotietä rakennetaan koko kaupunkiseudun kasvaessa voimakkaasti (ks. Tampereen kaupunkiseutu, 2015). Yhdessä muiden suurhankkeiden kanssa se uudistaa kaupunkia niin rakenteellisesti kuin toiminnallisesti. Ymmärrys raitiotien merkityksestä onkin vuosien saatossa muuttunut: merkittävää joukkoliikennehanketta halutaan käyttää kestävyden ja kasvun hallinnan välineenä, joka sitoo erilleen hajautuneita toimintoja yhteen (kuva 1). Se antaa konkreettisen materiaalsen perustan tulevalle kasvuille. Valmistuessaan raitiotie muodostaa joukkoliikennejärjestelmän merkittävimmän rungon, jonka varrelle myös suurin osa tulevasta maankäytöstä ja siten myös väestönkasvusta tullaan ohjaamaan (Tampereen kaupunki, 2017).

Raitiotie on vaikutuksiltaan seudullinen. Osana kaupunkiseudun MAL(PE)-työtä ja kestävä kasvun tavoitteita raitiotiestä suunnitellaan järjestelmää, joka mahdollistaisi seudun keskusten ja muiden kohteiden kytkemisen toisiinsa. Tämä luo painetta tiivistäville maankäytölle niin kehyskunnissa kuin keskustojen ulkopuolisilla asuin- ja työpaikka-alueilla sekä kaupan suuralueilla. Seudullisen raitiotiekaupungin rakentaminen on pitkän aikavälin strategista maankäytön suunnittelua, joka edellyttää eri suunnittelutasoilla tehtävän työn keskinäistä koordinoitua sekä pitkäjänteistä seudullista yhteistyötä. Suunnittelun keskeisenä haasteena on eri mittakaavatasojen ja aikajänteiden yhteensovittaminen. (Tampereen kaupunkiseutu, 2018)

Tampereen raitiotie näkyy katukuvassa jo vuonna 2018, kun intensiivisimmän rakennusvaiheen aiheuttamat poikkeusjärjestelyt haittaavat keskustassa liikkuvia ja asuvia ihmisiä sekä toimivia elinkeinoja. Vaikka rakennusaika on kriittinen vaihe kaupungin uudistumisessa, sitä on tutkittu kansainvälisestikin vähän. Elleivät suunnittelijat hahmota muutoksen dynamiikkaa ja esimerkiksi vaikutuksia yrityksiin, rakenteen yksipuolistuminen voi joillain alueilla olla riski reitin varren houkutellessa erityisesti asuntorakentamista. Yrittäjien haastatteluissa onkin korostunut tarve oikea-aikaiselle ja riittävän kohdennetulle tiedottamiselle keinona torjua sekä konkreettisia että koettuja haittoja.

[KUVA 1]

Kuva 1. Tampereen raitiotie kytkee toisiinsa kaupunkikehittämisen eri elementtejä. Lähde: Tampereen kaupunki, 2016, s. 62; vrt. Karppi & Sankala, 2016.

Kuntapäätäjien on kyettävä ylittämään hallinnollis-territoriaalisia rajoja

Useilla Suomen kaupunkiseuduilla suunnitellaan tai rakennetaan parhaillaan infrastruktuuriltaan merkittäviä hankkeita, joissa on sisäänrakennettuna laajempia kaupunkikehitystavoitteita. BEMINE-tutkimushankkeen tuloksia esittelevässä posterissa tuodaan keskusteluun hankkeiden ja niitä koskevien päätösten kauaskantoisia seurauksia. Näin pyritään tukemaan kehityshankkeiden parissa toimivien suunnittelijoiden ja päätöksentekijöiden työtä eri toimialoilla ja hallinnon tasoilla.

Raitiotien kaltaiset mittavat infrastruktuurihankkeet suuntaavat väistämättä kaupunkikehityksen fokusta vuosikymmeniksi eteenpäin. Tämän vuoksi on tiedostettava, ettei raitiotie suunnittelun kohteena rajaudu yksin liikennesektoriin. TOD-kehittämisen mukaisesti olennaista on tapa, jolla raitiotie kytketään ympäröivään kaupunkirakenteeseen ja sen toimintoihin, kuten elinkeinojen kehittämiseen ja kohtuuhintaiseen asumiseen (ks. Dawkins & Moeckel, 2016). Jotta raitiotiellä olisi potentiaalia toimia strategisena yhdyskuntakehittämisen välineenä, päättäjien on tunnistettava sen vaatiman sitoutumisen mittaluokka ja aikajänne.

Kaupunkiseuduilla tarvitaan toimivaa kuntayhteistyötä ja päätöksentekokykyä. Naapurikuntien on pystyttävä integroimaan maakäyttöään sekä tunnistamaan päätöksentekoprosessien kompleksisuus tilanteessa, jossa

on monta toimijaa, intressiä ja käyttötapaa. Parhaimmillaan raitiotien kaltaiset suurhankkeet tarjoavat alustan tulevien MAL(PE)-käytäntöjen kehittymiselle. Myös valtion tuella on tärkeä rooli. Sen tarjoama osarahoitus on kannustanut kuntia tekemään valintoja seudullisesta näkökulmasta. Erillisten kaupunkikehittämisen ”hankesalkkujen” hallinnan sijaan tarvitaankin kokonaisvaltaisempaa tarkastelua, jossa vaikutuksia sekä mahdollisia jännitteitä pohditaan laajasti sekä monipuoliseen poliittiseen keskusteluun tukeutuen.

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Kuvituskuva:



Kuva 1. Tampereen raitiotie kytkee toisiinsa kaupunkikehittämisen eri elementtejä. Lähde: Tampereen kaupunki, 2016, s. 62; vrt. Karppi & Sankala, 2016.

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POSTER Presentation



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Scalability of Green Infrastructure – case low-density housing and its gardens

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Summary

Green infrastructure (GI) is a concept including all the types of urban vegetation and stormwater management to provide multifunctional, scalable and sustainable solutions for urban landscape. The nature of GI seems to vary as the scale varies from the green networks between the cities to detailed stormwater management practices at site scale. This study concentrates on GI's scalability in the case of low density housing. This dynamic land use category shows that scalable GI requires both understanding on biophysical platform as conventional planning assignment, but also the socio-ecological processes it holds as this combination is the resource to enhance GI over time.

Avainsanat: scaling up, green infrastructure, water and vegetation systems, land cover, urban planning, SES

Extended Abstract

Introduction

Both in contemporary urban planning theory and practice there is an increasing interest in promoting multifunctionality in all land use categories in order to make a more efficient use of urban areas. Low density housing (LDH), as one of the land use categories, covers large areas in cities but also includes several functions by its very same nature. In addition to housing, low density residential areas comprise a component of urban green that serves one element for urban scale green infrastructure (GI). However, this element is defined in garden scale choices. This study concentrates on LDH and their private gardens as a dynamic socio-ecological system that could have a stronger role in the urban green infrastructure (GI). The aim is to demonstrate this system as an example of scalable GI.

Recent approaches to the scalability of GI aim to link different scales in a more sustainable network. Allen (2014) claims that GI planning often starts at the landscape scale by defining the ecological network of natural areas. He continues that regional scale bridges connection between landscape and site scales by concentrating on recreation and protection of natural resources, when site scale deals with sustainable urban drainage (SUDS) and habitat provisioning. Also Abunnasr (2013) and Demuzere and others (2014) provide definitions and approaches for scalability of GI, and they stress vertical integration of GI scales and the importance of spatial scales in case of citizen motivation to support the holistic management of GI.

Water and vegetation present the core elements of GI in detail scale. Water up-scales to SUDS elements, stormwater treatment trains containing the network of individual SUDS and then to sub-watershed

management containing all the components of water cycle from on-site management, open streams, drainage system and receiving lakes. Scaling up from individual plant comprises planted and non-planted plant groups (plantings), dynamic habitats where individual plants and species die and regenerate, and then to the urban green network providing living environment both to fauna and citizens. This scalable thinking highlights the interdependency between water and vegetation in detail scale.

Scalable GI

Climate change adaptation, flood protection, and hydrological qualities of catchment are often mentioned as motivation for GI's watershed scale studies. Schueler (2000) first showed the importance of imperviousness for receiving waters, and the idea was then identified as total impervious area (TIA) mainly used for planning urban developments. Later, also effective impervious area (EIA) was used to demonstrate that not all impervious surfaces are directly connected to drainage systems but rather infiltrating in situ. The corresponding scale in vegetation planning has been concentrating on ecological corridors and patches, but some studies found a link between water and vegetation. Brabec and others (2002) defined threshold amounts of forest cover to mitigate the impervious areas in watershed scales. However, the number of studies expand if vegetation covered areas are seen as environment for urban biodiversity.

The intermediate scale links stormwater management to sub-watersheds. Studies deal with flood prevention and the networks of different SUDS as treatment trains and their linkage to open streams and lakes. However, vegetation in parallel scale serves focus on habitats and habitat diversity that often include description of (soil) moisture.

Small scale, defined as parcel (Abunnasr, 2013) or site scale (Demuzere et al. 2014), concentrates on suitable SUDS and criteria for selection. Studies on small scale GI elements or typology mappings might mix vegetation and water elements, while the studies concentrating on biodiversity seldom holds water related approach. The most essential element of GI is the relation of water and vegetation that starts to build on small scale. Impervious coverage seals the surface for both infiltration and plant growth whereas non-sealed surfaces allow both of them. In addition, the soil volume and its specific characteristics define non-sealed areas for infiltration possibilities and water holding capacity for the needs of vegetation. Keestra (2018) argues that working with nature based dynamics requires deep understanding on the processes and feedbacks, and also how these dynamic processes affect in landscape scale. This leads us to define scalable GI first by impervious coverage and, second, by soil volume available for vegetation. These two dimensions situate at the same scale though one is area and the other volume unit.

Our previous proposal for scalable GI is representing biophysical environment that describes planning or implementation phase. However, the nature of GI in LDH is highly dynamic as there are many owners with varying gardening aims, values and needs. This means that scalable GI needs to be added by socio-ecological approach. Socio-ecological systems (SES) is a system that holds biophysical platform, like LDH, that is under on-going changes because of social actions, like residents. In the case of GI this includes gardening habits that support or prevent ecological improvements in the area. In this study ecological system implies for vegetation integrated water management in plot scale and then for habitat diversity in block scale and for ecological connections in neighborhood scales.

As applying SES to scalable GI it brings up the challenge how to plan or even manage this dynamic and multi-scalar element in planning processes. It seems that LDH provides GI that can be planned in planning process only to a certain level, and after that the dynamic small scale decisions are done by residents and their interest. However, if evaluation starts from small scale it shows that garden owners work with available commercial products to do gardening that is framed by layout plan defining plot scale hardscaping, drive way length, solar orientation and possibilities for infiltration.

Discussion

Low-density housing, taken as a whole, contains the nature and process of complex systems of man and nature that requires multi-scalar approach. Urban planning lacks tools to manage the GI's potential in low-density housing if it only concentrates on housing density. GI builds on the range of different habitats that occupy non-sealed surfaces. These surfaces also allow water infiltration, storage in soil and further use by vegetation, and plot owners design, manage and reconstruct these areas by altering gardening trends.

Discussions on GI's scalability faces the challenge of defining appropriate scales. The scales used in planning and design are not directly compatible for the scalable processes of vegetation or water management. Scaling up requires process and flow dependent knowledge as there is a risk that scaling up is done by too simple multiplications. The role of urban forest stand is not done by multiplying the characteristics of a single street tree.

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