

PRESIDENT'S AWARDS FOR RESEARCH 2016



Book of Abstracts

RIBA 

RIBA President's Awards for Research 2016 – Book of Abstracts
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Edited by Dr Kat Martindale and Alex Tait.

Thanks to Prof Flora Samuel, Reading University, Chair of RIBA Research and Innovation Group and colleagues from the RIBA Practice Department for their support.

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In the RIBA Strategy 2016–2020 we have committed to facilitating collaboration, research and innovation, both in practice and in academia.

Foreword

The RIBA President's Awards for Research were established in 2006 with the aim of promoting and celebrating the best of research in the field of architecture and the built environment that contributes to new knowledge and understanding of architecture and the practice of architecture. In the RIBA Strategy 2016–2020 we have committed to facilitating collaboration, research and innovation, both in practice and in academia, and through these awards we are proud to recognise outstanding research from across the built environment.

I am thrilled that the Awards have received an unprecedented number of responses following a review and restructure earlier in the year. This has encouraged many more submissions from practices to compete with submissions from universities, and collaborations.

The submissions this year have been judged by a fantastic panel of highly regarded practitioners and academics who have given their time freely to this and we are enormously grateful to them for their support and service.

My congratulations go to those who have been shortlisted and those who will go on to win. I know this year was fiercely contested with so many fantastic submissions showing the strength of architectural research.

This illustrated Book of Abstracts has been compiled as a record of the submissions to the 2016 President's Awards for Research to provide others across the profession with an indication of the breadth of architecture related research underway in universities and practice and, I hope, encourage you to contact and collaborate with like minds, and potentially submit your work for next year's Awards.

Jane Duncan,
RIBA President 2015–17

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The work submitted this year provides a glimpse of the global workings and interactions of architects, students and academics.

Introduction

The President's Awards for Research is in its eleventh year and earlier this year we undertook a review and restructure with the hope of encouraging a broader range of research topics and authors. The response has been tremendous. With 75 submissions from fourteen countries spread across five continents, our greatest number of submissions to date, work has come from students, academics, practices and multidisciplinary collaborative teams.

We have published all of the abstracts for the first time in the hope that this will not only encourage submissions for next year's awards but also to foster further collaboration, discussion and debate with those whose work is presented here.

The work submitted this year provides a glimpse of the global workings and interactions of architects, students and academics and includes field work and case studies from Lagos, Asmara, Melbourne, London, Hong Kong, Taipei, Gaza, Margate, Gujarat, Birmingham, Lillehammer, Sofia, Jakarta, Oxford, Athens, Delhi, Chicago, Harlow, Yeruham, Brussels, Oxford and Athens.

The breadth of topics are just as diverse with researchers tackling issues including contested spaces, flood resilience, ageing and dementia, future proofing cities and buildings, tall buildings, communities and their complex interconnections and circumstances

from prisons and convents to transient settlements and impoverished communities, digital modelling of workplaces and larger city-scale urban spaces, power struggles and working relationships, and heritage sites in the UK, Belgium, Eritrea, Israel, Myanmar and India.

Beyond the fascinating topics and work conducted, submissions have been illustrated with some spectacular photography, complex technical drawings, beautiful sketches and remarkably realistic computer generated images, all of which are tremendously important in communicating ideas and proposed solutions, and they have been used to illustrate this book.

My thanks go first to those who took the time to submit their work, working with the new format and my congratulations to those who have been shortlisted. I would also like to thank colleagues in the Practice Department, particularly Dylan Dixon, Dr Neal Shasore, Alex Tait and Lucy Carmichael during the review and compilation of this book, and to Professor Flora Samuel and RIBA President Jane Duncan for their ongoing and unwavering support. Finally, thank you to our judges who have spent part of their summer holidays reading the engaging, diverse and innovative work and two days debating the merits of this work to finalise the shortlist. It has been a pleasure to work with you on this.

Dr Kat Martindale

Head of Research and Innovation,
RIBA



Research is embedded in architectural best practice: innovation depends on it, conceptual thought demands it and the profession needs to recognise it more than it does at present.

Chair's Observations

Research is embedded in architectural best practice: innovation depends on it, conceptual thought demands it and the profession needs to recognise it more than it does at present. We were gratified therefore that the redefinition of the RIBA President's Awards for Research has resulted in an unprecedented increase in responses from practice, as well as a record number of submissions from the UK and around the world.

Practitioners who are committed to innovation will of course recognise the value of research and engage with it on a regular basis. But few take the time, or have the time available, to document their research in a form which clarifies it both for their practice and for the profession as a whole. But the discipline of recording a rigorous thought process, developing a thesis, calculating and measuring performance and providing feedback should all be part of the work we do for ourselves, individually and in collaboration with others, and the work we share in an open source environment.

It was gratifying to find studies submitted for this award from all aspects of architectural work, from exceptional conservation studies through to technical and environmental experiments and post occupancy evaluations. All of these stood alongside historical studies and polemical dissertations. There were some aspects of architectural research we felt were under represented however: work which looked at the development and prototyping of specific components and materials; cross-collaborations between architects and clients in the development of briefing documentation or between architects and builders developing successful contractual relationships.

My thanks go to my fellow judges: we think we had all bases covered from academia through to technical practice issues and thanks are due to Kat Martindale and Alex Tait at the RIBA for the way in which they have helped us run the process scrupulously and efficiently. I am grateful to all those who submitted the statements that are published here, it is evidence of the rigorous thinking that brings together practice and academia and deserves to be celebrated.

Peter Clegg,
Senior Partner,
Feilden Clegg Bradley Studios
Chair of the President's Awards for
Research 2016 Judging Panel

2016 Judges



Chair: **Peter Clegg**
Senior Partner,
Feilden Clegg Bradley Studios

Peter Clegg established Feilden Clegg Bradley Studios with Richard Feilden in 1978. Regarded as a key pioneer in the field of environmental design, he has more than 30 years' experience in low energy architecture and is actively involved in research, design and education. His active involvement in education projects includes a new School of Engineering in Toronto and an Academy in Bangladesh. His work in this sector led him to become primary author of recently published *Learning from Schools*, which focuses on FCBStudios award-winning school building programme. He was made Royal Designer for Industry (RDI) in 2010.



Amica Dall
Director,
Assemble

Amica is a founder-member of Assemble, and has lead on the much of their community-based work. She has taught around the world on urban childhood and the relationship between design and social and political life. Much for her current work focuses on play and children in the city, including *The Voice of Children*, an on-going research project on urban childhood, part of which will be presented at the Venice Biennale 2016. She is currently designer in residence with Giles Smith at Chapter Arts Center in the UK. She holds an MA in the Anthropology of the Built Environment, and is a member of *Theatrum Mundi*, a practice based research group based at London School of Economics.



Hattie Hartman
Sustainability Editor,
The Architects' Journal

Hattie Hartman is an architect, planner and journalist. Raised in the US and trained at the Massachusetts Institute of Technology (MIT), she has been based in London since 1991. Hattie is sustainability editor at *The Architects' Journal*, a position she created in 2008 after joining the journal's editorial team in 2006. She is responsible for the AJ's dedicated coverage of sustainable design and maintains close relationships with leading practitioners in the UK and abroad. She frequently lectures on mainstreaming green design and various technical aspects of sustainability. In her role at the AJ, she judges the annual AJ100 Most Sustainable Practice award, which includes practice-based research.



Professor Robert Mull

Robert Mull was a founder of NATO (Narrative Architecture Today). NATO made projects, staged exhibitions and actions and produced a magazine exploring the relationship between art, architecture and the DIY movement of the 1980s. Since then Mull has taught in many contexts, holding visiting professorships at the Academy of Fine Art in Vienna and the Technical Universities in Vienna and Innsbruck and teaching at the AA and in the USA, Seoul, Taiwan, Moscow, Berlin and Lima. Mull has been the chair of SCHOSA – the body that represents the Heads of Schools of Architecture. Mull became conjoint Dean of the Sir John Cass Faculty of Art, Media and Design and the Faculty of Architecture and Spatial Design in 2010 and brought them together to form a new Faculty, The Sir John Cass Faculty of Art, Architecture and Design, known simply as The Cass where he was Dean, Director of Architecture and ran the Free Unit from 2012 to 2016. Mull also established a new school of Architecture in Moscow. Currently Mull is Visiting Professor at the University of Umea and a partner in Beevor Mull Architects.



Dr Aylin Orbasli,
Reader in Architectural
Regeneration,
Oxford Brookes University

Focusing on the fields of building conservation, urban regeneration and heritage management I combine international consultancy practice with academic research and teaching. Consultancy assignments located in the Middle East and elsewhere have directly informed and provided material for my research and also shape a live-project approach I adopt in teaching. Critically, this research also underpins the consultancy and contributes to the development of innovative approaches to problem solving. Recent and ongoing projects include a heritage-led regeneration strategy for Mallow in Ireland; tourism development plans and management plans for both urban and archaeological sites in Saudi Arabia and the development of a management plan methodology for Petra in Jordan. In parallel, a research council funded collaborative research project on community-led heritage regeneration in Agra, India has provided an opportunity to engage students in integrated research-design practices.



Professor Chris Platt
Head of the Mackintosh School
of Architecture, The Glasgow
School of Art
Founding Director, studioKAP
architects

Christopher Platt is Head and Professor of Architecture at the Mackintosh School of Architecture at the Glasgow School of Art and a director of studioKAP architects (www.studioKAP.com). He is involved in research-driven practice and practice-based research writing on a wide range of issues overlapping practice and academia. He has lectured and taught widely across the UK, Europe, Ethiopia, Malaysia and China. His academic appointments include invited memberships to revalidation boards and external examination bodies. His media appearances include TV, radio and YouTube. A book, 'Dwelling with Architecture' written with Rod Kemsley was published by Routledge in March 2012.



Annual Theme –

Learning from Projects

Submissions were invited from those investigating the results of a construction project or process to develop new insight for use by clients, architects, engineers or other members of the construction industry. These could include, but were not limited to studies of:

- The briefing, design, and/or construction processes
- Project use/user interaction
- Building Performance Evaluation and occupant feedback
- Organisational performance

Make Public: Performing Public Housing in Ernö Goldfinger's Balfron Tower

David Roberts, Bartlett School of Architecture, UCL, UK

This study explores the history and future of two east London housing estates undergoing regeneration and focuses on Balfron Tower, a 1965-7 Brutalist high-rise on the Brownfield Estate designed by Ernö Goldfinger and facing refurbishment and privatisation in 2016. To 'make public' expresses three aims; materially – to protect public housing provision at a time when austerity measures are dismantling it in ideal and form; procedurally – to make visible problematic processes of urban change that are increasingly hidden from public view; and methodologically – to make public my act of research through intimate and sustained collaboration with the estate's residents on site. This research follows three phases; analysis of cultural, academic and archival material which foregrounds both the persistent accusations of failure that have afflicted the tower and the egalitarian principles integral to its vision and function as social housing; engagement with thirty residents through a series of

performative workshops which re-enact Goldfinger's own methods of gathering empirical evidence in 1968 to build collective knowledge; and activism drawing on this material and evidence to contribute to a more informed public debate and planning decisions. I develop three collaborative outputs; an interactive online archive as a resource to make all my research publicly accessible, viewed 16,500 times and described as an 'exemplar of its type'; a report to support and strengthen a resident-led campaign, described as 'a model document... sober and forensic'; and a successful application to list Balfron Tower at Grade II*, which explicitly recognises Goldfinger's social ideals and Balfron's social purpose as a key component of its heritage. In doing so, I advance an argument that the practice and guidance of heritage of post-war housing estates must not only pay tribute to the egalitarian principles at their foundations, it must enact them.



Balfron Tower,
Rowlett Street,
Poplar, London by
Erno Goldfinger
© RIBA Collections

Hybrid Building and Hybrid Practitioner: An Unbuilt Clan-Community Hall in a Chinese Natural Village

Xiang Ren, Sheffield School of Architecture, UK



Spatial strategy collage
© Xiang Ren

Uneven rural-urban development and rapid rural urbanization in China from the top-down has been challenging the very fundamental definitions of architecture and architects originating from the west. The value, meaning and knowledge embedded in vernacular architecture and villages, self-organized by the family and clan kinship is being lost. It is these irreversible changes in Chinese villages which result in the need for contemporary architecture and architects with more socially transformative value. The village with rural skin and urban masks is a hybrid; and the ancestral hall, where a collective action where social structures of the clan kinship were given a ritual expression, will be re-examined from a new perspective of 'hybrid building' and 'hybrid practitioner'. 'Hybrid building' will be expanded into active participation, thick interpretation, multiple authorships and unpredictable coproduction. Getting back to the natural village which stayed farthest from the political mega-structure, re-establishing

collaboration with the family clan which formed the deep structure, and getting hands dirty working with indigenous builders in the village are new approaches for the 'hybrid practitioner'. Data was collected through fieldwork and a 'Clan-Community Hall' project, in which interviews, consultation meetings and design workshops with a local barefoot architect, political teams, and clan members were organized in a natural village. By looking at this highly specific case through a detailed description on the process and product of 'hybrid building', and by placing the architectural version within a broader framework combining anthropology and activism, this research emphasizes the social transformative value and potential of 'hybrid building' and 'hybrid practitioner' under current Chinese hegemonic urbanism, which will bring a more inclusive and resilient way of hybridizing architecture as a palimpsest and a stage for multiple authorships and collaboration from the bottom-up.

Low-energy, In-situ Refurbishment and Building Performance Evaluation of a Historic Town Council Building

Prof Rajat Gupta & Dr Adorkor Bruce-Konuah, Oxford Brookes University, UK
Adrian Kite, Ridge & Partners LLP, UK
Alex Towler & Nicole Lazarus, Bioregional, UK
Susan Mackrell, Bicester Town Council, UK



Garth House
© Oxford
Brookes
University

Historic buildings usually come with high fuel use and low comfort levels for building users. Refurbishment of these buildings in an attempt to improve their energy efficiency, pose a number of challenges, including the need to preserve the historic character and building features. To tackle these challenges, it is important that reliable information is available related to their physical characteristics (construction, energy, environmental performance) and actual experience of occupants, so as to select appropriate refurbishment measures. This research project deployed and evaluated an innovative low energy refurbishment of a historic town council building (Garth House) in Bicester (Oxfordshire), underpinned by a systematic building performance evaluation approach pre- and post-refurbishment. Pre-refurbishment monitoring established the baseline performance and revealed issues of 'chilliness' from low surface temperature walls and low response times to heating the spaces, despite heating being on 24 hours a day. The innovative refurbishment

addressed the challenges of maintaining the historic character, minimising disruption for building users while improving comfort, by deploying an innovative internal insulation technology on the internal face of external walls, integrated with secondary glazing and ventilation systems. The central strategy was to create a new airtight and continuous thermal envelope that integrated with the existing structure. The key innovation was WHISCERS™ (Whole House In-Situ Carbon and Energy Reduction System), a technique to rapidly apply internal wall insulation while the building remains occupied and applied to a non-domestic historic building in the UK for the first time. Post-refurbishment monitoring showed 58% reduction in energy consumption, in line with the design target, while indoor temperatures ranged between 15-23°C during winter and 20-26°C during summer, although airtightness doubled. Most users found the spaces comfortable all year round. The project demonstrates that it is possible to make significant energy-savings in a historic building in continuous occupation.

Design Matters for Nurses – Hospital Design for Nurse Attraction and Retention

Dr Lucio Naccarella, University of Melbourne, Australia
Prof James Buchan, Queen Margaret University, Edinburgh, UK
Michaela Sheahan, Megan Reading, Kieren Morgan, Dr Agustin Chevez & Brett Pollard, HASSELL, Australia/UK

Nurses are the cornerstone of hospital care delivery. However, the attraction and retention of nursing staff is a significant issue in many healthcare systems and countries. There is evidence to suggest that maintaining a committed, healthy and sustainable nursing workforce requires a focus on the interactions between nursing and workplace design, organisational culture and work processes.

The key objectives of this research were to identify:

- Characteristics of workplace design that can improve attraction and retention.
- Contextual factors that may influence the interplay between workplace design and attraction and retention.
- Enablers and barriers to achieving workplace design that can positively influence attraction and retention.

A realist literature review was undertaken to explore the relationship between hospital design and nurse attraction and retention. The identified design characteristics informed twelve focus group discussions with 74 hospital nursing managers and ward nurses from metropolitan hospitals in the United

Kingdom and Australia. Practice-based evidence was generated about good hospital workplace design elements that pragmatically and symbolically contribute to the nurses' daily tasks. The narrative to emerge from the focus group discussions is that current hospital designs can contribute to a culture that de-values nurses. The erosion of the psychological contract between nurses and management is occurring due to a perceived increase in throughput of patients without corresponding increases in staffing and space provisions. This contributes to burnout, stress, and low job satisfaction. The findings suggest that workplace design can assist in demonstrating the value that hospital administrators place on their nurse workforce by providing comfortable, safe, and effective spaces for working, learning and rest. In parallel with design innovations occurring in the commercial workplace and education sectors, this research supports the inclusion in hospitals of innovative, dedicated spaces for nurses that provide opportunities for multi-disciplinary working, knowledge sharing, and social interaction.



Medibank Place,
photograph by
Earl Carter
© HASSELL

Derwenthorpe

Simon Bradbury, Plymouth University, UK

Richard Partington & Adam Cornish, Studio Partington, UK



View of Derwenthorpe
Phase 1 across
Jubilee Pond
© Studio Partington

Derwenthorpe is a mixed tenure, exemplar sustainable community of 540 high-quality, energy efficient homes on the periphery of York. The intention is to provide “a potential blue print for a family living in a truly sustainable community fit for the 21st Century” and is an outcome of a long-term vision, conceived and sustained by an exceptional housing provider, the Joseph Rowntree Housing Trust. The aim is to create a vibrant and supportive mixed-income, mixed-tenure sustainable community with high quality, energy-efficient, well managed and maintained homes which could be an exemplar that can be replicated. The project includes a range of interventions for both social

and environmental benefit in the home and wider community. Importantly these interventions have been subject to prototyping (through 2 initial dwellings), testing and post-occupancy evaluation with learning from earlier stages of the development fed into future phases as well as the findings being disseminated through academic and grey literature. In this respect the project offers both an exemplar for clients and architects looking to develop research through projects but has also made significant contributions to the development of knowledge, particularly in the context of the ‘performance gap’.

Care Provision Fit for a Future Climate

Prof Rajat Gupta, Laura Barnfield & Matthew Gregg, Oxford Brookes University, UK
Dr Alan Lewis, University of Manchester, UK
Prof Gordon Walker & Dr Louis Neven, Lancaster University, UK

Anthropogenic climate change is expected to result in hotter and drier summers, with heatwaves of greater frequency, intensity and duration in the UK. This has serious implications for future heat-related mortality, specifically for older people in care facilities, where research has shown they are among those most vulnerable to the negative health effects of overheating. This research examined the magnitude, causes and preparedness of the care sector in addressing the risk of summertime overheating across four case study residential care and extra-care settings in the UK, spanning different building types, construction and age. The methodological approach adopted was interdisciplinary, drawing from building science and social science methods, including building surveys, temperature monitoring, dynamic thermal simulation, and interviews with design, management teams, care staff and residents. The findings suggest that overheating is both a current and future risk in care schemes, yet there is currently little awareness or evidence of long-term strategies to provide suitable

adaptation methods and increase resilience within the sector, from design through to management and care practices. There was a perception from designers to managers, that cold represents a bigger threat to older occupants' health than excessive heat. A lack of effective heat management was found across the case studies that included unwanted heat gains from the heating system, confusion in terms of responsibilities to manage indoor temperatures, and conflicts between window opening and occupant safety. Better preparedness and adaptation strategies require input from architects, design and development teams, and care home managers and staff, as well as structured support in terms of enhanced regulations, standards and guidance from key care sector bodies and government departments. The study has been used in the forthcoming 2017 UK Climate Change Risk Assessment (UKCCRA) report and the Public Health England guidance related to Heatwave Plan for care sector.



Curtains in residents' room closed to reduce solar gain during the day
© Oxford Brookes University

Strategies to Improve the Thermal and Visual Comfort of the Informal Settlements in India

Sharmeen Khan, University of Westminster, UK



Open Spaces
© Adam Cohn

One third of the world's total population is from the urban areas of the middle income nations. The cities are growing and so is the need to provide basic shelter. The lack of provision of affordable homes in Indian urban areas leads to encroachment and unplanned development. One such city where more than 50% of its population lives in such settlements is Mumbai, India. These informal developments are not just made of housing typologies but also of work-spaces, which contribute immensely to the nation's economy and offer some effective examples of the live-work model. However, together with other major infrastructural shortcomings, the thermal and visual comfort of these spaces are never taken into consideration since they seem unaffordable to its users. Thus, the aim of this research was to study the existing spaces and to suggest affordable strategies in order to improve the living conditions and offer the inhabitants passive alternatives to the increasingly

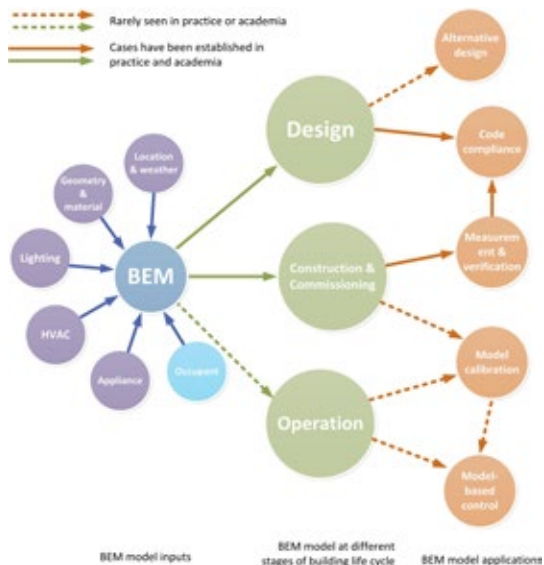
widespread use of mechanical options. This was attained through fieldwork by analysing the existing environmental conditions and inhabitants' perception of comfort and subsequently proposing retrofit strategies for the amelioration of the daylighting and summer comfort conditions. The main focus of the investigation was the design of the openings in order to achieve variable ventilation rates, to reduce the risks of overheating, as well as the required amount of daylight whilst simultaneously minimizing the solar gains. With the help of computational analysis, the proposal for the insertion of stack chimneys combined with downdraught shafts was tested. The results indicated that, these developments have high scope for improvement, hence adopting careful strategies would considerably improve the habitable conditions of its users along with sustaining its socio-cultural importance.

Design-Build-Operate Energy Information Modelling for Occupant-Oriented Predictive Building Control

Jie Zhao & Khee Poh Lam, Carnegie Mellon University, United States

This research introduces the concept of Design-build-operate Energy Information Modelling infrastructure, which can be used at different stages of the building life-cycle to improve energy and thermal comfort performance. The real-world application of this whole process is tested using a medium-size office building in Pittsburgh, Pennsylvania, USA. The DOE EnergyPlus whole building energy modelling tool is used throughout the process. At the commissioning and early operation stages, an EnergyPlus model calibration method is introduced using empirical data. The final calibrated model has a mean biased error of 1.27% and a coefficient of variation of the root mean squared error of 6.01%. At the operation stage, on the basis of the calibrated EnergyPlus model, an

occupant-oriented mixed-mode EnergyPlus predictive control system is developed. Given the Pittsburgh weather context and current operation assumptions, the simulation results suggest a potential 29.37% reduction in annual HVAC energy consumption. In addition, the system enables building occupants to control their thermal environment through an internet-based dashboard. In summary, this study has demonstrated that an original design stage EnergyPlus whole building energy model can be calibrated and utilized through the entire building life-cycle. Compared to typical building operation, implementing this process can achieve better energy performance and maintain occupant thermal comfort.



Potential value of BEM
© Jie Zhao and Khee Poh Lam



Dreamland, Margate, Kent by Iles Leathart & Granger, photograph by Arthur George
© RIBA Collections

Cities and Community

Submissions were invited from those investigating the relationship between the built environment and the people who live in it. Distinct from the historical category above, submissions here were to focus on contemporary city and rural environs, their challenges and communities and could include, but were not limited to:

- The role of the architect and architecture in social, cultural and economic sustainability
- Analysis and contextual studies of architecture in the cityscape
- Tall buildings and impacts on cities and the community
- Community focused projects including pro bono work
- Community engagement in projects
- Health, wellbeing and sustainability in the city

The Common Camp: Temporary Settlements as a Spatio-political Instrument in Israel-Palestine

Dr Irit Katz, University of Cambridge, UK



Kibbutz Givat
Brenner 1935
by Kluger Zoltan
© The Israeli
National Photo
Collection

From their emergence in the 19th century to their current global proliferation, camps have been created extensively by and for different populations under the modern state order. Whether employed by national and colonial powers as instruments of control, or constructed ad hoc by displaced populations as makeshift spaces of refuge, camps are used as a versatile mechanism for the rearrangement of people in space. In Israel-Palestine, camps are part of the significant geopolitical changes related to the state-building project and to the mass displacement it caused, providing a core example of similar enterprises of territorial alternation and social engineering. While the Palestinian refugee camps are well recognised and studied, many other types of camps which have appeared in the region over the last century together form a distinctive spatial paradigm. Through its particular manifestations in Israel-Palestine, this research examines the camp as a central instrument by which modern societies and territories

are administered, negotiated and reorganised. The research focuses on two frontier camps in the Negev desert: the Jewish immigrant transit camp of Yeruham and the neighbouring unrecognised Bedouin settlement Rachme, from their creation in the 1950s up to the present. It analyses how the camp is used by actors from all sides of the political spectrum as an architectural mechanism, whether to facilitate national and territorial objectives or as a platform for its residents in their ongoing political struggles. Agamben's theory of the camp as a space of the modern political order is critically reassessed in this work, primarily through the examination and theoretical interpretation of empirical evidence of the camp's complex role in Israel-Palestine. The identification, understanding and re-definition of the camp's multifaceted spatial vocabulary allows light to be shed on this encompassing phenomenon which becomes increasingly relevant and urgent in today's ongoing migration crisis.

Palestine Regeneration Team (PART)

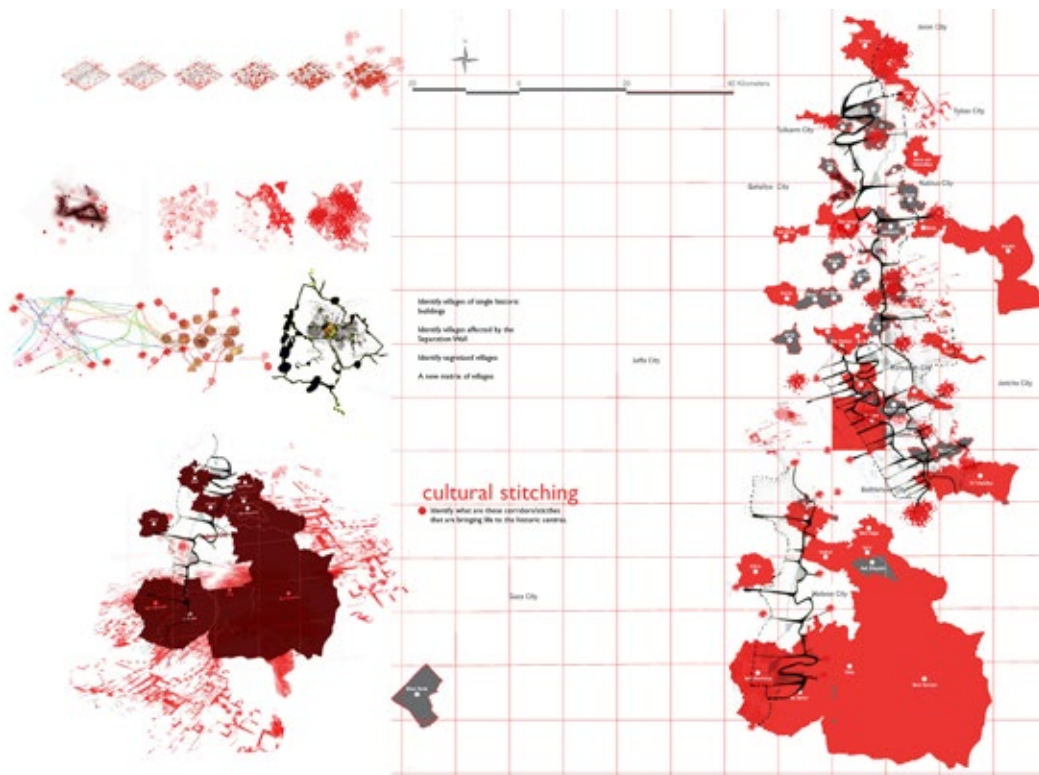
Dr Yara Sharif, Golzari NG Architects & PART, UK

Dr Nasser Golzari, Golzari-NG Architects, PART & University of Westminster, UK

Prof Murray Fraser, Bartlett School of Architecture UCL & PART, UK

This submission describes the design research of a team seeking constructive ways of using architecture and urban design to mend the fragmented landscape in Palestine/Israel through the principles of 'stitching' and 'empowering'. The aim is to explore spatial possibilities while also demonstrating the links between building and socio-economic regeneration, as a way to address issues of conflict and cultural identity. Importantly, therefore, the team's work demands an alternative approach within the context of Palestine that brings forward 'absent' narratives through spatial means. Using techniques of 'social mapping' and the analysis of everyday life and traditional cultural practices in Palestine, the projects extol low-cost low-energy sustainable design. In addition to designing urban layouts and retrofitting existing buildings in derelict Palestinian towns and

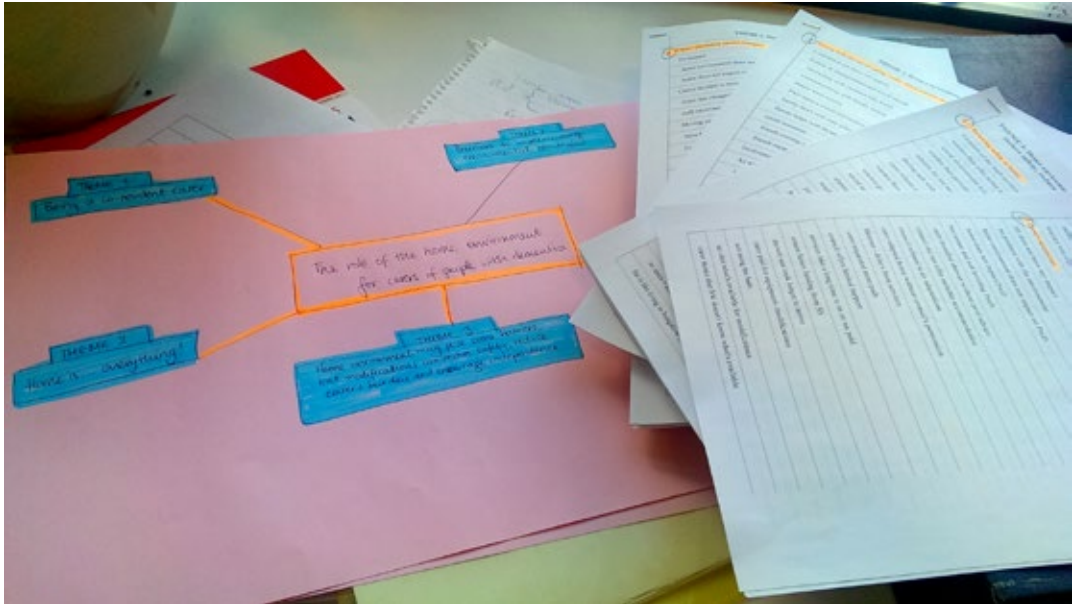
villages – in both the West Bank and Gaza Strip – the team also engages in speculative design projects that explore hidden potentials within the fissures created by Israeli occupation. The work presented here builds upon previous involvement in an ongoing programme to regenerate 50 historic towns/villages that together contain half of Palestine's surviving built heritage, two projects for which won prestigious international architectural awards in 2013 and 2014. This piece however focuses on recent projects that push the urban and sustainable design approaches further, and which involve close participation with community groups. A wide range of exhibitions, publications, lectures and workshops have been used for dissemination. The overall proposal is for a form of 'green stitching' of derelict urban areas that has relevance for all countries, not only Palestine/Israel.



Sketch proposal for various possible matrixes across the Palestinian map, which if overlapped and crisscrossed could create future scenarios for restitching
© PART

Living Well with Dementia at Home: Understanding the Role of the Home Environment

Dia Soilemezi, University of Portsmouth, UK



The role of the home environment, themes for carers of people living with dementia
© Dia Soilemezi

This project aimed to explore the role of the home environment in dementia care and support, and it consists of two parts. The research starts with a systematic synthesis of international qualitative studies exploring the role of the home environment, architectural elements and strategies. From 11824 citations found in 12 databases, 40 qualitative studies representing nine countries, 653 informal carers, 372 people with dementia and 120 professionals were analysed using thematic synthesis.

Findings indicated that:

- (a) Home, although an important place, can also be a place of tensions.
- (b) Home needs to remain individualised and flexible to accommodate life and health challenges and changes.
- (c) Adapting the physical space, objects and behaviour is necessary to facilitate quality of life.

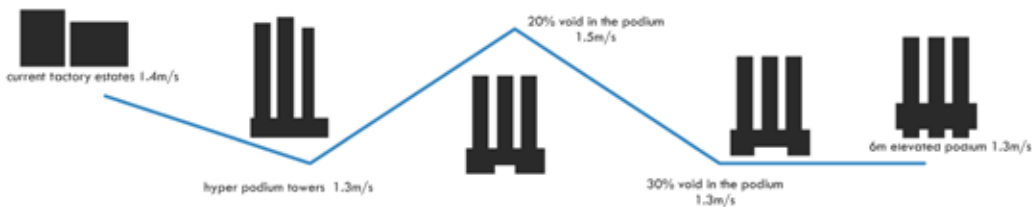
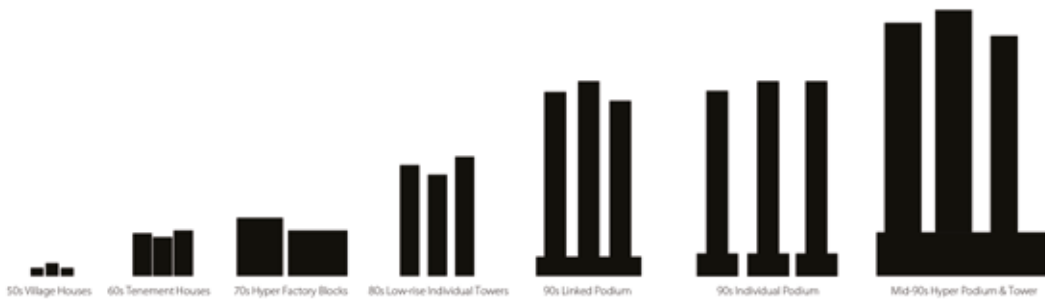
These findings offer evidence on a number of important architectural and design aspects that need to be taken into consideration to support community dementia care. The second part involved walking interviews with thirteen co-resident family carers to explore (a) the subjective and (b) the objective impact of their home, and were analysed thematically. Findings revealed that 'home is everything' for carers and has different meanings ('home as a secure haven', 'home as a prison') and great impact on carers (relocation versus staying in place but redefining their home). Data also revealed the impact of home as a site of care provision and highlighted important aspects of the architectural and interior environment, that when adapted can encourage independence and comfort at home. The unique challenges of dementia and the important home components (e.g. size, layout and accessibility) need to be taken under consideration to ensure future housing is dementia and caring friendly to correspond to the needs of our ageing society. Future carers will clearly benefit from the adaptability and hybridity of their homes.

Impacts of Building Typologies on Pedestrian Wind Environments in High Density Urban Areas

Dr Ruffina Thilakarathne, Assoc. Prof Paul Chu & Yana Xiao, Chu Hai College of Higher Education, Hong Kong

High density areas in Hong Kong typically experiences less than 2m/s wind speed at the pedestrian zone. Building typologies dramatically changed from 1960 to 1990s and new towns were developed in order to increase housing supply. With the introduction of Comprehensive Development Area plan for new towns in mid 1990s, Hong Kong adopted a “hyper podium & towers” typology that consists of a 15m tall mixed-use podium and residential towers above. These podiums occupy 100% plot ratio creating continuous facades and narrow urban street canyons. This study investigates the impacts created by ‘hyper podium & tower’ developments on pedestrian ventilation considering Tsuen Wan new town. Tsuen Wan district being one of the first new towns developed by the British Colonial Government is currently undergoing rapid transformation from industrial to residential land-use. Considering former factory sites as prospective redevelopment zones, this study

investigates four design modifications to the hyper podium & towers typology and their influence on urban ventilation. Four modifications represent; standard podium, 20%-30% void in the podium and elevated podiums. Our postulation is that these modifications may restore pedestrian ventilation at least to early 1990s urban ventilation levels in this area. Historical wind profiles for Tsuen Wan were developed for each decade of development from 1960-2015 using 3D digital models and Computational fluid dynamics ANSYS Fluent. Findings indicate, decrease in undeveloped land area (porosity) from 51% to 8.3% from 1960 to 2010 reporting a 1.1m/s wind speed reduction. This drastic drop could be attributed to the introduction of 15m ‘hyper podium & tower’ developments in the mid-1990s. Design modification results indicate improvement in the pedestrian wind speed by 0.2m/s with the introduction of 20% void in the podium compared to other options.

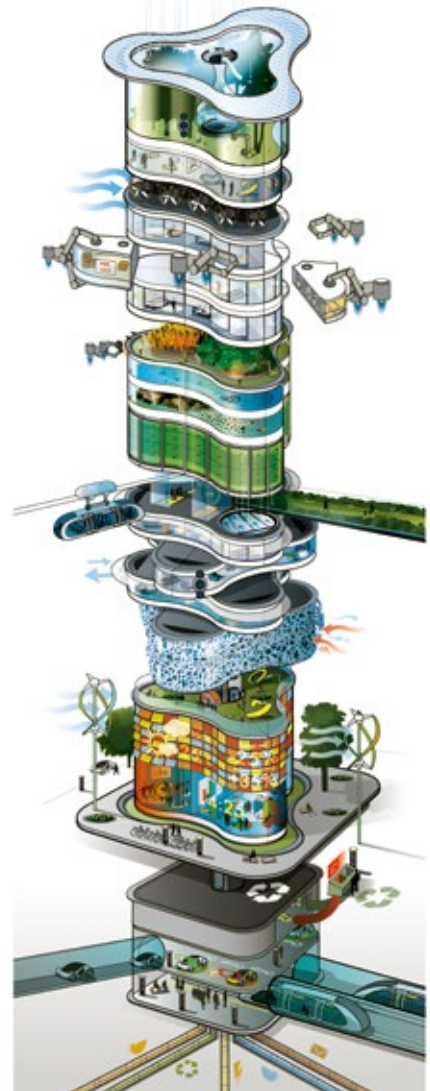


Improvement in wind speed with the introduction of a 15m podium
© Ruffina Thilakarathne

New Era: Vertopia

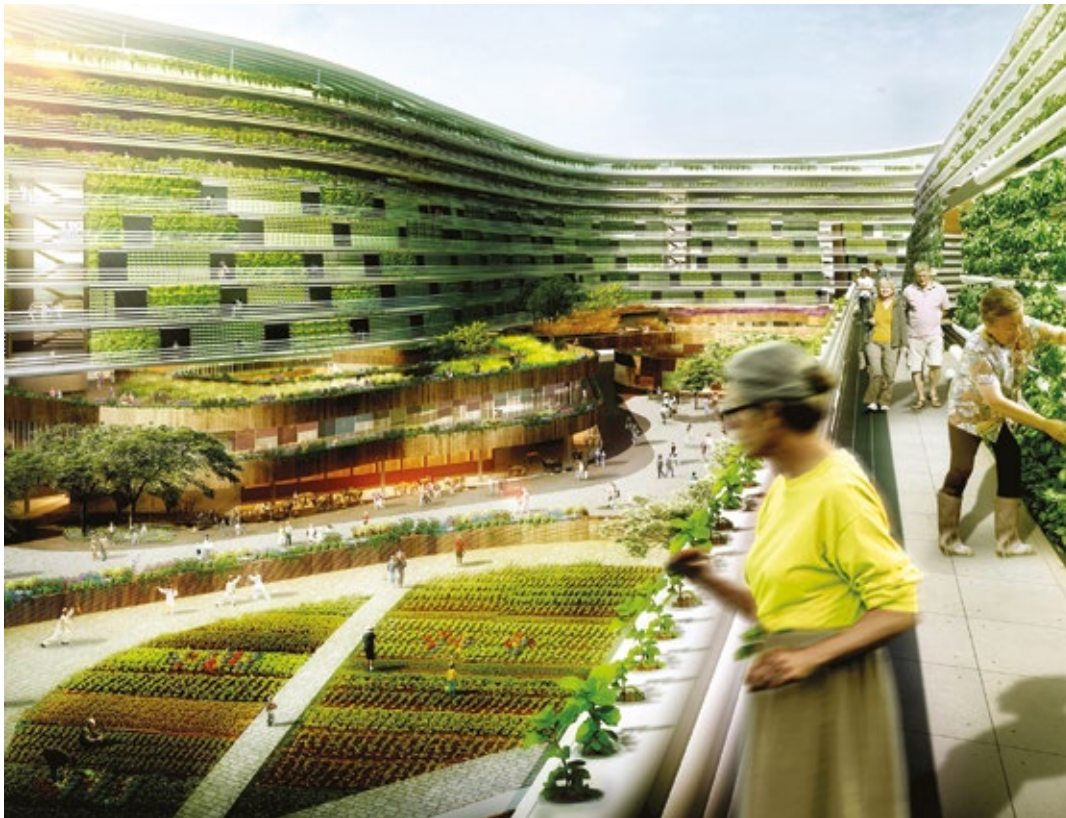
Afaf Shahid Naseem, Glasgow School of Art, UK

“On a planet with vast amounts of space (all of humanity could fit in Texas – each of us with personal townhouse) we choose cities.” – Edward Glaeser, 2011. With this statement it is possible to redefine life as we know it and construct a new theory for architecture. One which reconceptualises scalar thresholds and proves that just because we can, it does not always mean we should. Nonetheless, it is vital to appreciate the blowout and understand the way of thinking about the future from our predecessor's perspective; this may help comprehend the reasoning behind why our cities look the way they do today. Vertopia: noun | ver • to • pia | \ˈvər-tō-pē-ə\ A vertical place where people can work and live in a self-sufficient and well integrated ecosystem. It serves as an urban solution for the 21st century city problems and is structured on the vertical axis. It contains essentially everything you could possibly need without having to leave the self-sustaining place. It can be beneficial to build vertically but there is a framework to consider and once the design moves out of those boundaries, it will undoubtedly fail. The elements to take into account when designing the Vertopia are: bottom-up decision making; rational, empiric, and pragmatic thinking; integration with context; regional scale appropriation; hierarchy of space; adopting first principles: food, water, air and shelter; sustainable construction and operation; social reform and sense of community; demographics and user responsive; feasible technological systems; and economy of means. Every era has its revolutionary ideologies, Vertopia, simply put, is the latest version of the next big thing for the built environment. Serving as an urban solution to world capitals; if we adapt now, we can mitigate for the future.



Home Farm

Stephen Pimbley & Narelle Yabuka, Spark Architects, Singapore



Public deck of
home farm
© Spark Architects

Home Farm is a research-by-design outcome emerging from the dual challenges of Singapore's ageing population and the multi-pronged problem of food insecurity, but it simultaneously expands on Singapore's 'City in a Garden' vision in a productive capacity. Home Farm brings intensive farming into the city environment and right into the daily residential realm, closing the gap between food producers and consumers. It builds the conditions for new possibilities in terms of how we might live, work, and care for ourselves 'post-retirement'. The architectural narrative is an amalgamation of building tectonics, agricultural and environmental technology, which are altogether informed by our research findings. In Home Farm the two typically separate realms, senior housing and urban farming, are brought together to understand how the city-state of Singapore might support a rapidly ageing society, and how it might enhance its food security

90% of which is currently imported. The shift in age demographics creates significant financial, social and infrastructural stress to the city. On the other hand farm area in Singapore had reduced tremendously over the decades resulting in high dependency on food imports and concern towards food security, as there is a high possibility of food supply and food prices being impacted by regional and global situations. Through active processes of vigorous image making and visualisation experiments, research findings were analysed, synthesised and spatialized to further challenge pre-conceived parameters surrounding senior housing and urban farming. The final concept proposal is distilled through rigorous cycles of inquiry and design experiments enriching the underlying principles of Home Farm. Home Farm is a residential and commercial farming typology for Singapore that combines apartments and facilities focused on but not exclusively senior living and vertical urban farming.

Ageing and the City: Urban Resilience and Socio-spatial Marginalisation of the Elderly in East London

Theodora Bowering, University of Cambridge, UK

This research seeks to interrogate the conditions and experiences of marginalisation and resilience of older people within cities, looking specifically at civic spaces in the London Borough of Newham. The proportion of the UK population over the age of sixty-five is growing at a notable rate, pushing to the fore the question of how the elderly live within cities. The revived debate about the 'right to the city' has largely ignored ageing as an area of urban conflict despite thematic intersections with studies of ageing. Newham offers a rich terrain for the investigation of urban themes due to its planning and housing legacies, regeneration agenda, high deprivation and population levels, and ethnic diversity. It is also relevant to a study of ageing having the third highest level of income deprivation for elderly people in the UK. Within this framework, the role of civic spaces – including streets, squares, transport infrastructures, markets and community

centres – in supporting resilience and marginalisation is key. In their everyday routines older people inhabit, traverse, observe, avoid and contest civic spaces. By these acts, both passive and active, they map out their own personal territories and networks. These are not static but subject to the myriad forces – social, political, economic, health – that constantly influence civic spaces and their practices. Ethnographic and spatial studies reveal how ordinary urban spaces are transformed through their quotidian occupation into civic places that are fundamental to the elderly, especially when vulnerable, and their ability to resist their marginalisation. Spatial investigations of the role of urban contexts in dynamics of isolation and resilience begin to bridge emerging debates in health studies with key issues currently at the heart of urban studies research.

Sybil and Philip at their allotment a four minute walk from Hamara Ghar. ©Theodora Bowering
The Queen's Market, Green Street ©Theodora Bowering



Newcastle City Futures 2065 Research Project: The City as a Creative Participatory Space

Prof Mark Tewdwr-Jones, Prof John Goddard & Dr Paul Cowie,
Newcastle University, UK



Family area in the Newcastle City Futures exhibition
© Mark Tewdwr-Jones

The Newcastle City Futures 2065 (NCF2065) research and engagement project (2015) was an innovative city-wide approach to engage residents, local authorities, politicians, service providers, charities, professionals and businesses about the future of Newcastle and Gateshead. It has become increasingly recognised that achieving good qualities of life in the UK depends in large part on a good future for cities. Across the UK political spectrum there is also a consensus that local communities need to play a greater role in urban government, both in the decisions made that affect people's everyday lives, and in the design and delivery of services provided by the state. This requires new approaches to engage citizens, with universities having the potential to play a role in creating opportunities for more place-based forms of local democracy.

The Project aimed to use the best available scientific and other evidence and expert and public opinion:

1. To work with local partners and national bodies in establishing a review of key research applicable to the city region;
2. To establish a transferable methodology through which expertise in local universities could be mobilised on a sustainable basis and focused on the long term future of a city region up to 2065;
3. To develop long term thinking capacity in the partnership around key future challenges such as environmental sustainability, long term economic development, the healthy and ageing city, urban to urban relationships, and urban and rural dynamics.

Using mixed media and social science and arts and humanities methods, the project was designed to make urban change issues more accessible to a wider audience to spark a big city conversation.

Travel Writing, and its Influences to and from Architecture, in Context of Shahjahanabad, Old Delhi

Divya Chand, School of Planning and Architecture, New Delhi, India



View from atop
the south western
minaret of the
Jama Masjid
© Divya Chand

This project is an exercise in gathering accounts of various travellers, who over the centuries have visited Shahjahanabad and perceived its urban spaces and written about them. The text recognizes the wider significance of travelogues in social studies and specifically investigates Interpretations of Indian travelogues. An attempt is then made to analyse the gathered accounts about Shahjahanabad, to understand its past and present. Through this process, we achieve an understanding of the spatial evolution of Shahjahanabad through the centuries.

Also discovered, is the evolution of how this place has been perceived by visitors and outsiders, as well as locals, and how this perception has altered along with the space. We see how travel writing has played an important role in history, though its building character of places. Further, the increasing importance of good, observational writing is noted, particularly in today's age of information and imagery overload. Travel writing not just documents the observations of a person at a place, but can help us to better understand the city at a personal level.

Playing for Citizenship: Reinstating the Urban Child

Emma Kitley, Bartlett School of Architecture, UCL, UK

33% of the world's population are children, and 54% live in urban areas. This is predicted to rise to 84% by 2050. Cities are under considerable pressure to cater for a broad range of ages and requirements, and have a responsibility to provide for the continued growth and development of the future generation. All children have a biological need and a legal right to play, protected in Article 31 of the UN Convention on Children's Rights. However, cities today are failing to design with children in mind and as a result are ostracising them from an environment to which they need access, to use play as a tool for learning. Play provision in cities generally consists of static playgrounds, an inadequate response to the needs of urban children, suggesting that play should only occur in isolated locations. Play is in fact constant, and these 'destination' play spaces should be supported by a network of accessible neighbourhood streets

between the playground and the home. Roy Kozlovsky believed that 'If the modernist imperative was to make play environments 'imaginative', it followed that the 'imagination' at play, should be that of the child, not that of the architect.' A series of research exercises conducted through workshops with Primary school children investigated the effectiveness of child participation in the design process to procure child-friendly urban strategies. Attempting to bridge the gap between play theory and design responses, Chicago is used as a case study, where the majority of the urban environment has grown hostile towards children, to cite design proposals. Playing for Citizenship resonates with an increasing concern over the exclusion of children from their urban context – this generation will have no desire to participate as citizens. A city's survival relies on its ability to cater for a child's desire to play.



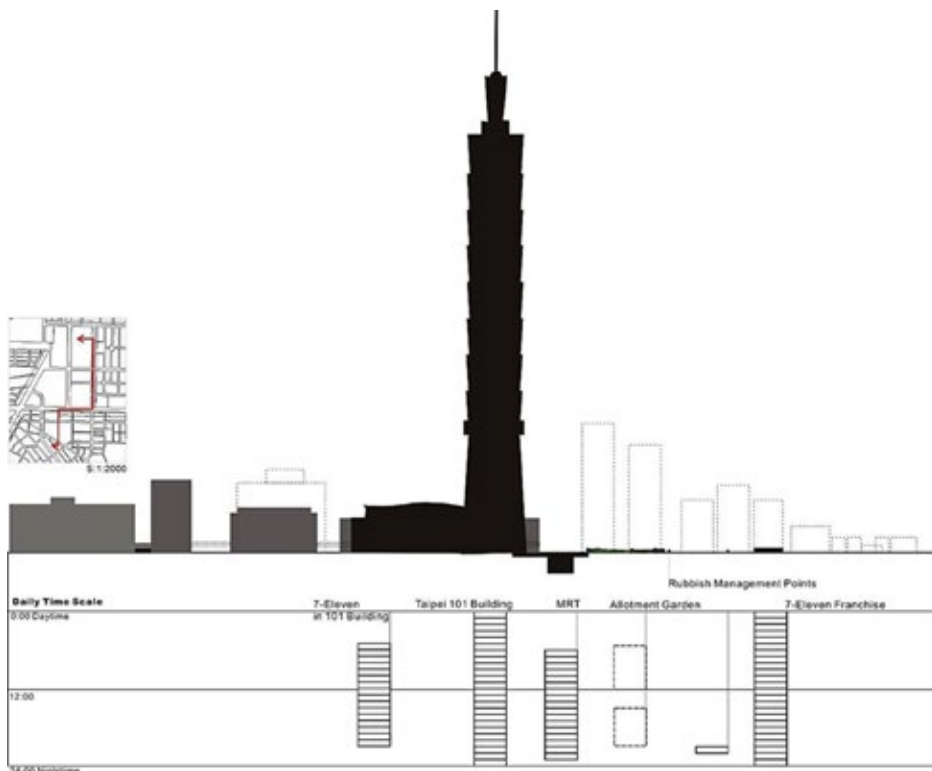
Chicago Playground
© Emma Kitley

Baroque Cities? The Concept of Scale in Global Urban Centres, with Particular Reference to the Xin-Yi Planning District of Taipei

Shao-Yu Huang, The University of Edinburgh, UK

The aim of this paper is to explore new methodological approaches to understanding the complex and multi-scalar conditions that manifest in contemporary global cities in East Asia. With a special focus on the city of Taipei, Taiwan's largest city, the paper indicates that cities that appear to be merely 'big' urban formations disguise many overlooked global 'middling' and 'small' conditions that emerge from their struggle with their post-war urban reconstruction and the emergence of globally networked urban logics. The paper argues that new ways of thinking through the concept of scale is essential to better appreciate and properly understand these extremely large cities and their complex transformations. It hence suggests that different kinds of 'bigness' and 'smallness' coexist, and that this coexistence is central to the experience of such cities. The theoretical framework of the paper is grounded in re-examining the idea of scale within the particular fields of architecture, geography and urban studies. The concept of a hierarchically-nested scale has been a dominant approach to scalar conceptualization

in these fields for a number of decades. However, the paper argues that this linear approach has been weakened by its limited abilities to respond to current urban conditions of those cities in the context of globalization. Drawing from the critiques of *The Fold* and the concept of 'flatness', as well as critical work on place significance, the paper proposes a 'Baroque' alternative to these conventional theorizations of urban scale. In order to offer an enabling approach to cities such as Taipei, the paper develops this 'Baroque'-inspired methodology by examining five selected socio-spatial practices at different scales in the Xin-Yi planning district of central Taipei. The paper concludes by proposing the idea of the 'Baroque City' as a more suggestive, multi-dimensional approach to capturing the richness of the contemporary urban scale of cities. It is intended that this will not only support investigations of East Asian cities, but also enhance architectural engagements with such dynamically complex and multi-scalar conditions of global urban centres.



Relationship between the five socio-spatial practices
© Shao-Yu Huang

Through the Scopic Lens: Geology, Agency and Secrecy of Fallahin Architecture

Hania Halabi, Balmond Studio, UK



Concrete Tent
© Hania Halabi

In the dusty hilly terrain to the South of Hebron, Susya, a village of 340 peasants “Fallahin”, lives on the brink of eviction, awaiting the implementation of demolition orders issued against its structures by the Israeli Civil Administration. The orders are based on the claim that these structures are illegal, while ignoring the fact that this condition is brought about by Israel’s discriminatory policies in Area C, which restrict Palestinian construction by declining almost all building permits (Kadman, 2011). In this context, I associate Israel’s practices with “Grey Spacing” defined by theorist Orel Yiftachel, as positioning a population between the ‘lightness’ of legality, safety and full membership (white space), and the ‘darkness’ of eviction, destruction and death (black space). I inquire into the role that the urban and architectural practices of Fallahin play in delineating and maintaining the borders of these spaces. I base my research methodology on the photograph of

a “Concrete Tent”, which resembles an informal architectural typology that has emerged in Area C during the past two decades. By analysing the tent’s envelope, which is composed of concrete and fabric, I reveal how each of the two materials delineates the borders of the black and white spaces respectively. Susya’s grey space as I argue, is defined and maintained by tolerance understood as incorporating the village’s existence within a system that refuses to recognise it. In the absence of a building foundation as a stabilizing structural element, I further show how the tent’s architecture inscribes certain logics of secrecy to obtain stability, and postpone demolition orders. Finally, I argue, that the secrecy-tolerance constellation in Susya, suggests a reversal in roles between the state and people in regard to practices associated with the two concepts; and demonstrates how Fallahin utilise their grey space as a basis for self-organisation, negotiation and empowerment.

Blind Sense of Place: A Sensory Ethnographic Study on Parameters for Optimal Design

Nirma Fernando & Dr Anishka Hettiarachchi, University of Moratuwa, Sri Lanka

Architecture is considered predominantly as a visual experience in common practice. However, the built environment needs to be inclusive addressing all the people who are in different sensory capacities. The current research study was focused on Architecture for visually impaired. The objectives of this qualitative investigation were to explore the nature of blind sensual perception and identify the parameters of blind's sense of place leading to optimal design. The research was conducted, with a sample of visually impaired children (n=13, age = 16-22, male: 7 and female: 6) who are students of Rathmalana school for the blind. A sensory ethnography study was adopted to identify the nature of perception and the parameters of most preferred and least preferred spaces of the school premises. The blind sensual perception, considering the order of prioritization of sensory modalities, was identified as; haptic perception (35%), light perception (27%), auditory perception (19%), olfactory perception (11%) and visual perception (8%)

respectively. Sense of comfort (46%), and sense freedom (31%) were identified as the predominant psychological parameters leading to optimal sense of place perceived by visually impaired while safety (8%), rhythm (8%), privacy (3%) and sense of belongingness (4%) were identified as secondary factors. Being in harmony with the elements of natural landscape, cross ventilation, artificial ventilation and lighting in a conducive level were revealed as favorable characteristics. Glare, noise, irregular rhythm in vertical circulation (risers and treads of the staircase) and lack of safety in textural design elements were identified as the unfavorable characteristics of least preferred places. This investigation revealed the importance of transcending beyond the bias of vision and designing inclusive built environments addressing haptic perception incorporating textural effects of materials, ventilation, sound, smell and lighting leading to optimal design conducive for visually impaired.



View of the
Arched corridor
© Nirma Fernando

Pioneer Perspectives: Rethinking New Towns and the Building of New Communities in England

Dr Helena Rivera, A Small Studio, UK



Pioneer perspectives
© MAZE
Resident's
Association,
Harlow

Throughout the twentieth century, England experienced a continual housing crisis that persists to this day. In an attempt to manage it, philanthropists, policymakers and politicians have directed planning policies and legislation to build new planned communities: Howard's town/country magnet; New Labour's sustainable communities; and, the recent Conservative government's initiatives in delivering locally-led garden cities. The New Towns programme provides an important example of how goal-driven planning policy was used during the period 1946-1976 to address the housing crisis. This research focuses on the first wave (mark 1) of New Towns built as 'balanced communities for working and living' (Reith, 1944) between 1946-1955 in Southeast England, to decentralise London's population and industry. Three critical lenses are employed to understand the development of mark 1 objectives: self-containment (Hall 1973, Ward 2004), newness vs. sameness (Clapson 2003) and governance (Aldridge 1979, Reade 1987). This research repositions the notion of balance as a continuum rather than a rupture in

planning history's meta-discourse of building new communities. A principal critique here is that the historiography of New Towns has been predominantly written by experts (academic and otherwise), providing a limited interpretation of the legacy of (living in) New Towns. To empirically rectify this, Sandercock's (2003) suggestion of a narrative-led approach is employed in investigating a mark 1 case study: Harlow New Town. Perspectives of original New Town pioneers as well as planners/officials working in development corporations and local authorities/councils have been collected and analysed for a hitherto undocumented experience of planning, building, managing and living in a New Town. It thus provides not only valuable scholarship on New Towns, but also reinforces their contemporary relevance to the continued pursuit of building new communities in England. Sir Peter Hall (1980) identified that planning served three sets of actors; politicians; bureaucracy; and community. An important contribution this paper makes is that 'pioneers' should be included as a fourth actor.

Water Centric Planning

Robert Barker, Forrest Mews (Formerly Baca Architects), UK
Richard Coutts, Baca Architects, UK



Oslo Opera
House by
Snohetta
© Baca
Architects

Water has always shaped our towns and cities as we have sought to harness it and to control it. Therefore many of our great cities are founded on the coast and major waterways. Historic waterfronts and waterspaces are frequently found to be at odds with the needs of the 21st century population that now occupy them. Water will pose one of the most serious challenges to society in the 21st century and beyond. However it can, through considered design, be embraced and harnessed to create more beautiful and resilient cities. Our relationship with and dependence on water are examined and we explore some of the innovation and ingenuity that past civilisations have demonstrated in designing with water. We consider how we can learn from this in the design of our future cities – to help safeguard property, people and wider communities, as well as to enhance our quality of life. Water can provide the

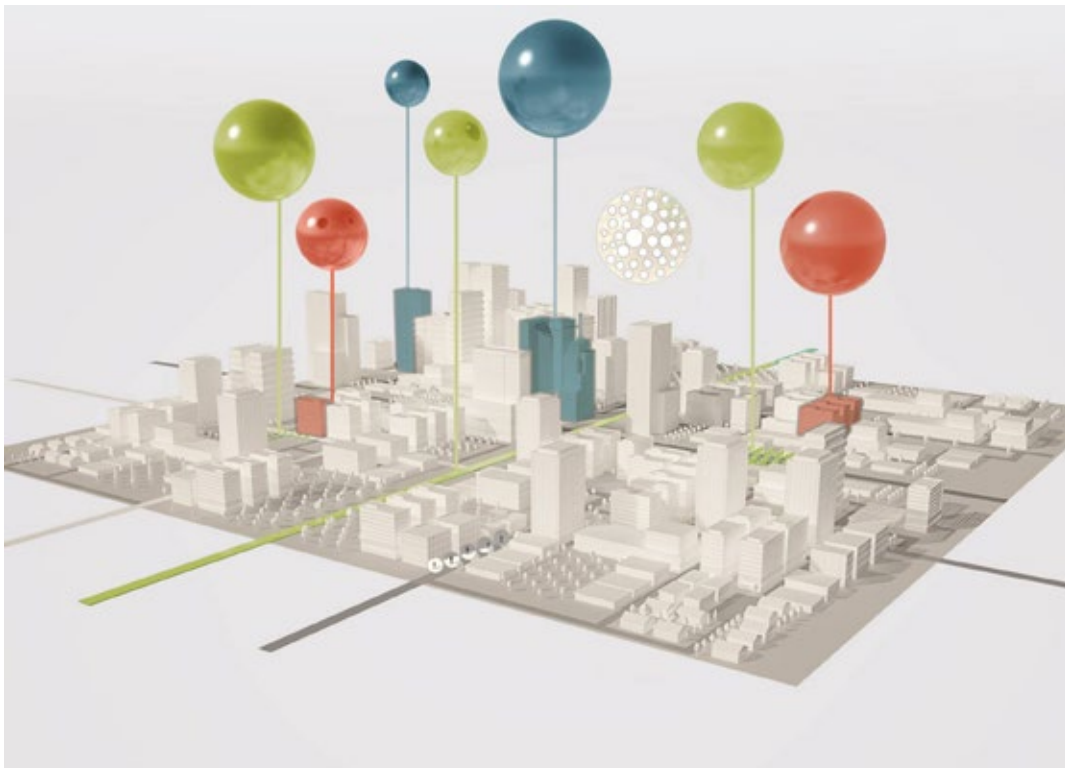
organising element around which communities are planned. Engagement with the water and relation to the water can be therapeutic, beautiful and enjoyable. Good planning can bring life to the water, which in turn brings life to the surrounding area, and provides economic longevity. Expressing and engaging with the waterspace can help to give towns and cities structure and meaning. And in different climates and cultures it may provide the opportunity to create distinct destinations. Bodies of water can act as landmarks or, when combined with blue infrastructure, provide a means of way-finding. The most successful waterfronts, those that leave a lasting memory and draw one to return, embrace the water. By examining different waterfront typologies we establish how regeneration can activate the water and enhance the spatial organisation.

Decision Globes. Information Visualization Model for Strategic Spatial Planning

Irina Petrova Angelova & Dr Valeri Ivanov, University of Architecture Civil Engineering and Geodesy, Bulgaria

The purpose of the study is to propose a model for information visualization, suitable for the dynamic process of strategic spatial planning in Bulgaria. The model focuses on the stages of the process in which basic analyses associated with the quantitative and qualitative phenomena in the urban space are performed. The model for information visualization is an unaltered part of an integrated information system, whose main aim is to lead to an optimized and informed planning process. The building of a model for visualization of spatial information requires an integrated approach in its formulation. Horizontal integration (sequence) is used in the analysis of the work in the different stages of the planning process. Vertical integration (simultaneity) is required for clarification of the technologies and tools for visualization, which will serve the model and the

representation of information. Thus, the planned action plan is limited by the structure of the planning process and the actors, who are the main users of the system. The main contribution of the study is the creation of the prototype Decision Globes model. The strategy of the model was formulated on a conceptual level. On a functional level, a layout of the model was built through a combination of widely used software. It was applied on a physical level through a workshop with students and experts. The development of the model does not end. This work initially explored the possible level of detail for the application of the model, the level of object presentation and the relationship between user and object. By highlighting the main advantages of the model, guidelines were derived for developing a practical model for information visualization.



Decision Globes
© Irina Angelova

Challenging Perspectives, Strategies for People-powered Urban Upgrading

Martin Mejia, Frances Brown, Marisela Castañeda, Hani Fakhani, Edgar Gonzales, Bouchra Jamal, Wen Shi & Xiayi Zhou, Bartlett School of Architecture, UCL, UK



Steung
Men Chey
Community
meeting
© Martin Mejia

This report analyses the rapid urban transformation in Cambodia, focusing on sites within the capital, Phnom Penh. The first part was identify the different discourses into four categories of actors: the urban poor, the market, the government and organisations with resources (such as local, national, intra-national, and international non-governmental organisation or international financial aid institutions). The power relations between each of these four main actors' discourses become apparent when they engage in urban development practices. Although some discourses clash, other discourses strengthen. These partnerships, or lack of, are therefore significantly driving urban change. How can we provoke a change in the trajectories of discourses, in order to create a situation where the people's discourse further influences the market and the government? In what way can we attain a dream situation where discourses align and are produced in tandem? Our understanding of transformation is through these main actors'

discourses evolving and competing visions of the future of Phnom Penh. Meanwhile, during the field trip we conducted several site visits, attended lectures, and conferences with different stakeholders. We will find that land security is pivotal in the process of urban poor settlements upgrading. In so doing, we will be proposing local urban strategies where negotiation powers of the urban poor are increased in order to enhance feelings of security, and eventually upgrading their living conditions. These strategies are therefore built on people's existing radical grassroots pro-poor practices, to respond to people's needs, and contribute toward enhancing their power in negotiation development projects in city planning. Finally, we look towards scaling up our visions of Phnom Penh's urban transformations. We therefore created city wide strategies that are to be implemented both locally and city wide. As such, these city wide strategies provide the regulatory framework for the implementation of site specific strategies.

Cathedral Cities in Peril

Spencer de Grey, Bruno Moser & Theo Malzieu, Foster + Partners, UK
Terence O'Rourke, Terence O'Rourke Ltd, UK & English Heritage, UK

Our smaller historic towns and cities are in danger of losing their character and beauty. Often thriving as communities, and one of the glories of English life, the demands of urban expansion to meet growing housing targets threaten their much admired intrinsic value. The amount of urban and developed land has grown by 5.4% across the country (2000 – 2010), such is the pace of growth. Urban growth is accelerating and we need to find a balance between the desire to protect and the need to expand, integrating the need for new homes with the regeneration and conservation of the historic environment. Often ambitious expansion is planned on the green belt for the sake of ill-defined economic return; or conversely, housing demand remains unmatched leading to a crisis of affordability. Elsewhere, excessively protective attitudes and a convenience-driven, developer approach result in a blanket ban on new development in city centres, pushing development onto greenfield sites and

creating standardised, disconnected and monolithic 'islands'; alternatively there are occasions where a lack of vision and commitment from local authorities leads to urban decay. In King's Lynn, a historic town facing increased urban growth, of the 7,500 homes that will be built between 2001 and 2026, only 1,600 are planned within the city – a low-density, car-dependent urban model. Our research proposes alternatives that seek to reverse the contradiction between urban growth and heritage. Not only must we provide the right amount of houses, we must also plan them in the right places, schedule them at the right pace, build them to the right quality and ensure that they are affordable. A holistic approach to the growth of these urban centres should build upon the attractiveness of living in the historic centre, while avoiding unbridled expansion on the ever-shrinking countryside – one of our most valuable assets.



Durham's cathedral and compact city centre, surrounded by green fields
© Superstock

Cities Alive: Towards a Walking World

Susan Claris & Demetrio Scopelliti, Arup, UK

In our mission to shape a better world we must shape better cities. With nearly 70% of the world's population set to live in urban areas by 2030, the quality of life experienced by this population will determine our global future. It is increasingly cities, more than national governments, that have the power to tackle climate change, fuel the global economy, deliver prosperity and alleviate poverty. Intrinsic to the success of cities and the quality of life they offer, is how people move around within them. In the twentieth century, planning for the city was about planning for the car. In this report we make the case for policies that encourage walking to be placed at the heart of all decisions about the built environment, as walkable cities are better cities for everyone. Cities Alive: Towards a walking world demonstrates the significant social, economic, environmental and political benefits

of walking. Informed by specialist insight and multidisciplinary expertise from across the globe, this report highlights 50 benefits explored through 16 distinct indicative themes, and lists 40 actions that city leaders can consider to inform walking policy, strategy and design. These actions concern visions and strategies, safe and efficient transport systems, creating liveable environments, a sense of place and community and smart and responsive cities. The various dimensions of walkable cities are explored through a set of interviews with leading thinkers in this field – experts from Gehl Architects, the University of Hong Kong, Arup, Project for Public Spaces and the City of Auckland. These show what can be achieved and are designed to inspire us all towards a walking world. A walkable city is a better city and putting walking first will keep our Cities Alive.



Health and wellbeing, safety, placemaking, social cohesion and equality
© ARUP

The Ayni Project: Development of Sustainable City and Housing Model, from a Multidisciplinary Perspective

Fánel Regina Contreras Guevara, Daniel Alberto Ocupa Florian, Eduardo Josue Ramos Martinez, Edward Amador Puente de la Vega Tinajeros & Natalia Sofia Távara Fernandez, Universidad Nacional de Ingeniería, Peru



Ayni Project
Team Photograph
© Pedro Solan

The Ayni Project consist in the development of sustainable city and housing model, from a multidisciplinary perspective, it is an integral project that seeks to link the academia, government institutions and the private sector in the development of applied research projects that contribute to the generation of knowledge on issues of housing

and sustainable city. As part of this project the Ayni Project Team, with the National University of Engineering Peru designed and constructed a social housing prototype for the International Sustainable Architecture Competition, Solar Decathlon 2015 Latin America & Caribbean.

The Network of Making: Social Infrastructure – A Change to Decentralized Framework as a Medium of Regenerating the Overpopulated Lagos Context and Similar Habitats

Adekanmi Ojuri, Oxford Brookes University, UK

Dr Chinwe R. Nwanna, University of Lagos, Akoka, Yaba, Lagos, Nigeria

HRM OBA Odewale Odesanya, The Olofin of Otto Mainland and Environment of Lagos, Nigeria

Baale Shemede Ajakaiye, The Baale of the Water in Makoko, Nigeria

Alhaji Chief Ibrahim Aladetan, The Baale of Apollo Community Makoko, Nigeria



Makoko which is not particularly 'Venice'
© Adekanmi Ojuri

This research arises from growing concerns of the interaction between growing informal settlers such as Makoko within the coastal plains of the populous Lagos city which is on the verge of gentrification and their limited access to central infrastructure as a result of being abandoned by the state. The consequences of climate change on low lying coastal plains further worsens the habitats of this community. It can be recognized that Makoko has an exclusive culture of soft infrastructures that extends to different scales

and functions within the region and vary from the common hard infrastructures managed by the state government. My ground work findings indicate that independent communities abandoned by the state can develop a catalyst to spark to be spread and adapted to other decentralized communities in a growing urban context like Lagos. Making is the catalyst chosen for this Makoko proposal which can spark growth within the community and similar habitats.

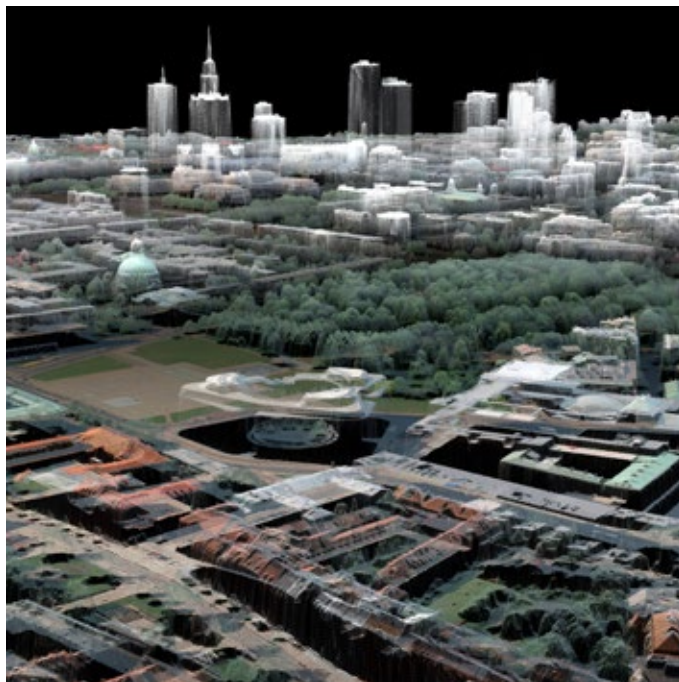
2TaLL: Application of 3D Virtual City Models in Urban Analyses of Tall Buildings

Dr Klara Czyńska, Dr Paweł Rubinowicz & Dr Adam Zwoliński,
West Pomeranian University of Technology, Szczecin, Poland

The 2TaLL project examines the use of 3D virtual city models to provide advanced urban analyses of the impact of tall buildings on the landscapes of European cities. The research problem is current and relevant to contemporary urban planning. In the past decade tall buildings have become increasingly popular in Europe, causing rapid change to the landscapes of many cities, posing a threat for urban heritage. Therefore, there is a need for new simulation techniques to be used in planning process that will help to determinate the spatial consequences of tall buildings development in an objective and comprehensive manner. Introducing modern computer methods and techniques into the world of architecture and urban planning creates a unique combination of technical research with the concepts of beauty and spatial order that exist together in diverse urban structures. The interdisciplinary approach to this research topic required conducting parallel activities:

- a) in the field of architecture and urban science, including professional approach and subjective interpretations of cityscape; and
- b) in the more technical field of geometry, geo-information, and computer science, leading to develop objective analytical methods.

Project research included the documentation of tall buildings and analysis of their impact on the landscape, based on fieldwork in 13 European cities. This resulted in the discovery of new methods of analysing tall buildings using 3D models. These methods enable a diagnosis of the visual impact of a building in a city (VIS), protecting important landscape clusters against the impact of new building (VPS) and various analyses of public spaces (3D-Negative). The research conducted within the project contained both an elaboration of theoretical assumptions of new methods, as well as the creation of new software solution (C++), enabling its application for different types of 3D city models.



Digital Surface
Model Warsaw
© Czyńska,
Rubinowicz,
Zwoliński



Balfron Tower,
Rowlett Street,
Poplar, London by
Erno Goldfinger
© RIBA Collections

Design and Technical

Submissions were invited under either or both headings of Design and Technical. Research was to concern an investigation addressing the influence or impact of design, form and/or technology on the use, quality and/or performance of a space or building/s. Topics could be holistic or focus on a specific element, addressing, but were not limited to:

- Materials, detailing and/or construction methods
- Design quality and/or project management
- Computational Design and BIM
- Spatial integration
- Sustainability, low carbon solutions and/or 'systems' performance

Supertall Timber: Design Research for the Next Generation of Natural Structure

Dr Michael Ramage & Dr Rob Foster, University of Cambridge, UK
Simon Smith, Smith and Wallwork, UK
Kevin Flanagan & Ron Bakker, PLP / Architecture, UK

This research project aspires to make truly tall timber buildings a reality. Through a combination of theoretical design and physical testing this research demonstrates the viability of timber buildings at much greater heights than has previously been possible. By pushing the limits of theoretical designs into the realms of the supertall, sometimes beyond that which is feasible using current materials and construction technologies, this research also sets out the requirements for the next generation of engineered plant-based materials. The approach is research through design, and design through research. Timber towers are designed well beyond existing heights, and analysed to understand how they stand up and which areas are most critical for further research. By bringing highly regarded architectural and structural designers together with the research capabilities of a leading university, this project creates a precedent-setting model for interdisciplinary engagement within and

between the design and research communities. By coupling exemplary design in timber to a university's research capacity, the project represents a real opportunity for transformational change in the design of tall timber buildings. Essential details and connections are determined and 'unknowns' with respect to material and structural performance are identified. A programme of testing to investigate these unknowns and validate the design approaches is carried out at the university. Outcomes of the test programme and new insights are fed back into the design process. The results show that tall timber towers are feasible, with substantial but surmountable questions outstanding. By providing thought provoking yet credible solutions for the design of tall timber buildings and exceeding current limits, the project can inspire the design community to think beyond the status quo and embrace the possibilities offered by timber construction.



14 storey Treet
building in
Bergen, Norway
© Rob Foster

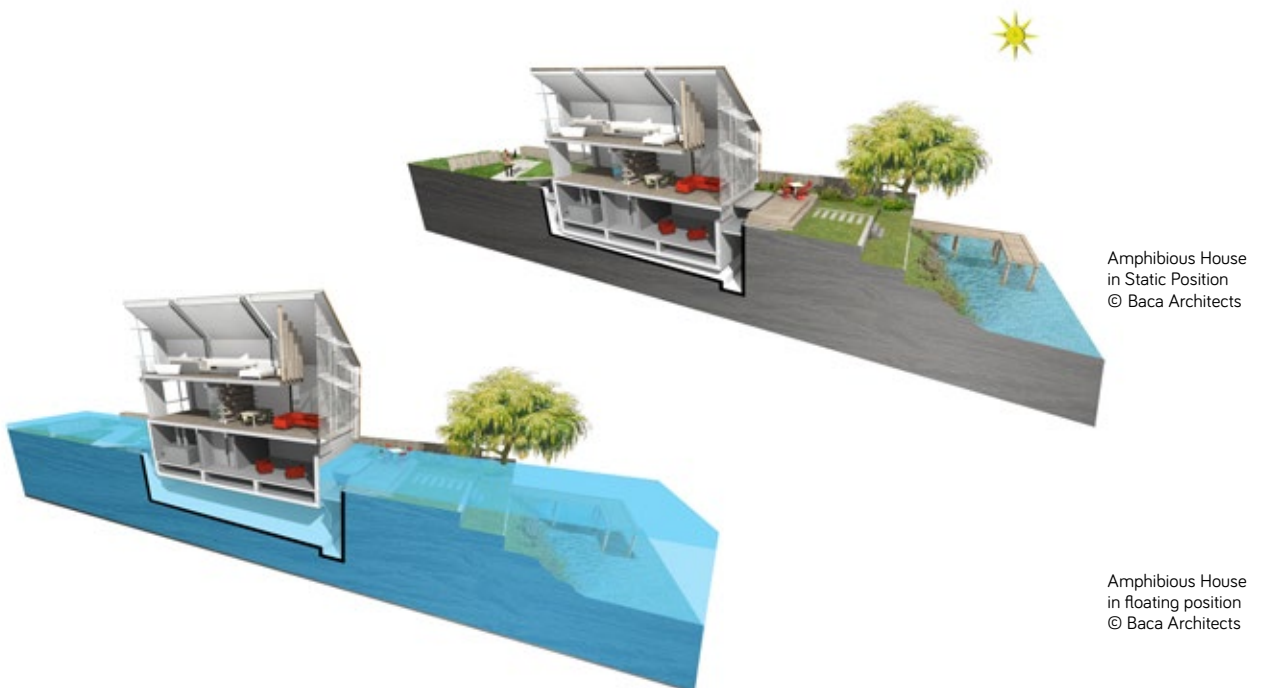
UK's First Amphibious House. Can-float Amphibious Building

Richard Coutts, Baca Architects, UK

Robert Barker, Forrest Mews (Formerly Baca Architects), UK

An amphibious house is a building that rests on the ground on fixed foundations but, whenever a flood occurs, rises up in its dock and floats there buoyed by the floodwater. In the last 20 years, the ten worst international flood events alone claimed over 50,000 lives, affected one billion people and resulted in damages in excess of \$165 billion. Higher frequency storm events over the past decade and the failing of recently constructed flood defenses in Cumbria have exposed a growing uncertainty in weather patterns and a weakness in relying on traditional flood defenses alone. In 2009 the Authors published The LiFE 'Long-term Initiatives for Flood-risk Environments' Project for Defra marking a fundamental shift from traditional flood prevention towards a non-defensive approach; based on 'Making Space for Water' – working with natural processes to provide space for water to expand during times of flood. This paper examines if Amphibious Architecture may provide a long-term failsafe solution to UK flooding. It examines Amphibious Architecture in the

context of best practice approaches to masterplanning to reduce flood-risk and climate change. It also considers amphibious design alongside other property level approaches to reducing flood-risk and reviews the design of the UK's first Amphibious House located in the middle catchment of the River Thames. The proposition was a real site, with a client and budget. The authors had to determine: what an Amphibious House would look like? How it would function in static and flood positions? How services would be connected? and how to make it acceptable to Planning and Building Control in the absence of any UK precedent? During construction the house was tested when the amphibious base was completed, to assess the integrity of the hull, water-tightness, balancing, and the running gear. It was tested again on completion to rebalance the system. Practical completion was achieved in spring 2015 and the client is now enjoying their aquatic lifestyle. The author's offer thanks to the Client for their contribution to flood mitigation and this new architectural typology.



Amphibious House
in Static Position
© Baca Architects

Amphibious House
in floating position
© Baca Architects

The SPAB Building Performance Survey 2015 Report

Caroline Rye & Cameron Scott, ArchiMetrics Ltd, UK



Mill House
© Archimetrics

Originating in 2011 the Building Performance Survey is an ongoing research study that uses in situ monitoring to provide information regarding the performance of traditional buildings following energy efficiency refurbishment. The study was originally designed to address the lack of information surrounding the performance of traditional, pre-1919, solid wall, buildings in order to inform and aid decision making with regard to suitable refurbishment measures. Of particular concern was whether certain 'improvement' techniques might lead to the accumulation of moisture within historic building fabric. In 2014 the research was extended to focus specifically on interstitial moisture behavior in the insulated walls of three of the study buildings. The research uses innovative monitoring techniques to provide detailed measurements of interstitial temperature and relative humidity. Multiple analyses of the results are carried out using a number of different

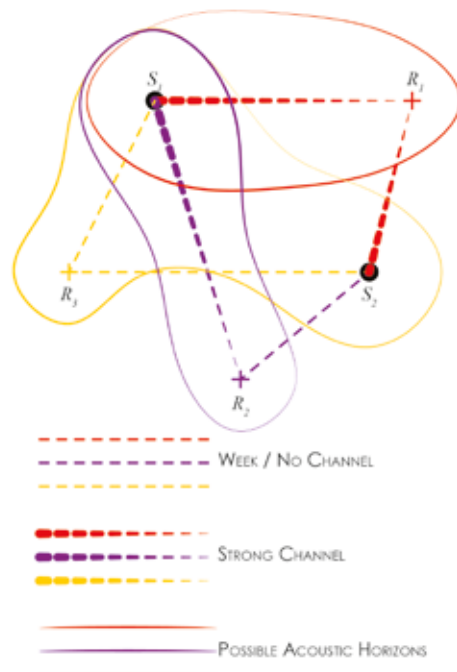
methods of vapour quantification. By 2015 sufficient measured evidence had been accumulated to provide confidence in the findings concerning the long-term performance of the insulated solid walls. The 2015 Research Report presents this evidence in graphic and written form, with an analysis that relates this year's findings to those of previous years, in order to draw a picture of long-term moisture behavior. The research finds one wall operating within safe margins, one with a trend of accumulating moisture and another with a moisture profile dominated by the persistent effects of construction moisture. Each of these characteristics can, in part, be ascribed to the refurbishment treatments carried out on the walls. It is thought that this study represents the longest and most comprehensive monitoring of interstitial moisture in the UK to date. It is hoped that this report will be of interest to all those attempting to weigh up the risks and benefits of refurbishing older buildings.

Sonic Urban Morphologies Towards Modelling Aural Spatial Patterns for Urban Space Designers

Dr Merate A. Barakat, AA Alexandria Visiting School, Architectural Association, UK

This research develops a tool that integrates the theoretical spatial and soundscape design concepts, to aid spatial designers when considering sound as a driver for urban design. The investigation explores the merging of spatial and acoustical computational approaches, through integrating the physical/mathematical representation of sound to the mapping of the spatial envelopes and phenomena of human aural responses. The key design-based contribution is the development and calibration of a computational design and decision-aiding tool that can predict qualitative patterns of aural spatial perception, and translate them into spatial attributes within a modelled urban space. The fields of computation simulation, soundscape, and psychoacoustics inform the structure of the tool, the input parameters, and the testing and validation processes this research adopts. The merging of these concepts and processes are the knowledge-based contribution this research offers to the field of architecture. The tool produces spatial patterns as

representations of the distribution of sound energy of predicted acoustic spaces and the intermediary domains between them. The tool structure is built as a JAVA-Based program and is mediated by the current research and the predicted future development. The research trajectory targets a higher complexity that indicates the use of Multi-Agent Based (MAB) systems. The short-term goal of determinability indicates the use of the Image Source method. To that end, the system is designed as an MAB deterministic system that allows for preliminary validation of the predicted patterns and has the potential of becoming a stochastic generative tool. The tool is designed as a portable system that can run on a mid-level laptop by integrating concurrent programming to offset the computational time. The distribution structure divides the processes according to the use of the system to compute the image source method, run the perceptual aspects, plot the results, and provide architectural graphical representations.



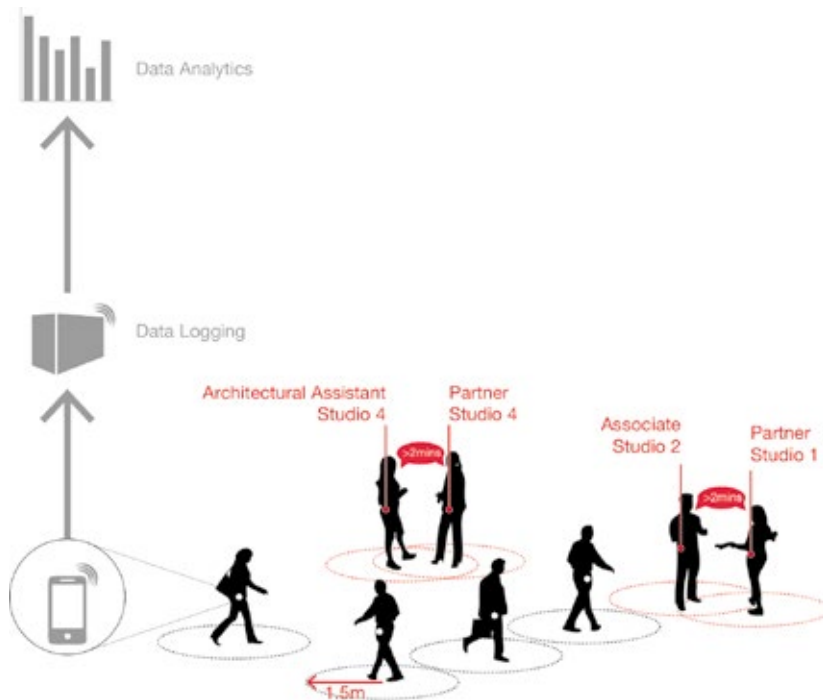
Schematic
diagram
© Merate Barakat

Creative Ecologies

Michael Riebel, Darryl Chen & Tom Fox, Hawkins\Brown, UK

Contemporary knowledge economy is characterised by networks of knowledge workers who produce innovation collectively. A key aim for workplace design for the knowledge economy is therefore, to create an environment for effective knowledge transfer and low levels of permissiveness to afford good communication between collaborators. It is, however, not the spaces for the actual collaboration processes that pose a challenge to designers; it is the question how architecture can create and foster a climate of trust between potential collaborators. American studies emphasize the importance of informal "chats" as a precondition for successful knowledge work. This informal communication typically takes place in permissive spaces like the canteen or – famously – at the water cooler. What employees talk about, is less important than the communication as such. It is the aimless informal communication that creates an atmosphere in which a future meaningful will

take place. As our practice is involved in a series of projects dealing with advanced workplace design we started a field study that tracked the movement and communication pattern of our employees. For one week each employee carried a phone with an application that was tracked by a grid of Bluetooth beacons. When two phones were in proximity, an algorithm decided whether an informal chat took place or not. The result brought to light that the coffee machine or the copy machine is not necessarily creating the bulk of informal communication. One of the most "successful" small talk spaces was a corridor that was leading up to the sole colour printer for 180 employees. A planned spatial inefficiency proved to be a successful communication generator. One of the key insights of the study is that intelligently arranged inefficiency or "positive disruptions" can be used as a successful design tool.



Beacons
© Hawkins Brown

Not Just Jail: Seeking Custodial Excellence Through Evidence Based Design

Karen Crilly, Northern Ireland Prison Service, UK



San Diego
Sheriff's
Department's
Las Colinas
Detention and
Reentry Facility
© KMD
Architects

The Northern Ireland Prison Service (NIPS) is a significant contributor and supports one of the main objectives of the NI Department of Justice which is the 'building of safer communities'. The contribution of NIPS requires us to work with and manage people within a custodial setting; with the ultimate aim of reducing their risk of reoffending when they return to the community. Inherent within our resettlement strategy is the requirement that all aspects of our interaction with prisoners should contribute to the promotion of positive change and management of risk. A major element is the physical environment and the recognition that space 'conditions'. Therefore Prison Design is very important in contributing to 21st Century rehabilitation. As NIPS moves from a security dominated environment to a more normal one we have embarked upon a major rebuilding programme to deliver a modern, fit for purpose prison estate that is effective and efficient but most

importantly, that it supports staff delivering real outcomes for prisoners and ultimately contributes to a safer community. As the newly appointed Head of Estates Capital Work for NIPS and as an architect, I am acutely aware that the central tenant of prison design is the provision of a safe, secure and decent environment for all. My key objective will be to provide NIPS with the best custodial environment possible and contribute to the rehabilitative process. This research opportunity, through the Winston Churchill Fellowship, has allowed me to see how other countries have approached prison design, how they have incorporated their inherent cultural, social and environmental issues and what custodial research and measurement has been undertaken. Ultimately, I will apply the knowledge that I have gained, use it for the benefit of my own organisation, and make my contribution to the building of safer communities within Northern Ireland.

From Sustainability to Sustain-abilities: Learning From Professional Actors

Dr Gareth Abrahams & Eirini Tsianaka, Sheppard Robson, UK

Sustainability has long since been a normative agenda in architecture. Many of us use this term freely to describe a range of different design decisions. But few of us ask whether our understanding of 'the sustainable design decision' is equally held by the architect sat at the next desk, the mechanical and electrical consultant in the design team meeting or the site manager in the site office. This paper tackles this fundamental question. Drawing on data generated by a range of professional actors working in design and contractor teams, our analysis reveals two key findings: Firstly, that the definition of sustainable

design is dependent on professional actor's role in the design and development process. Secondly, our research suggests that this role-dependent, contingent understanding of the concept equally extends to the way/s it is operationalised. Building on these findings we suggest that in order to form 'sustainable decisions' one should draw on the unique abilities of different specialists within the design and construction industry. Taking these findings into account, we conclude the paper by considering new directions for practice: directions that favour sustain-abilities over sustainability.



Sustainability?
© Sheppard
Robson

Creative Discovery in Architectural Design Processes: An Empirical Study of Procedural and Contextual Components

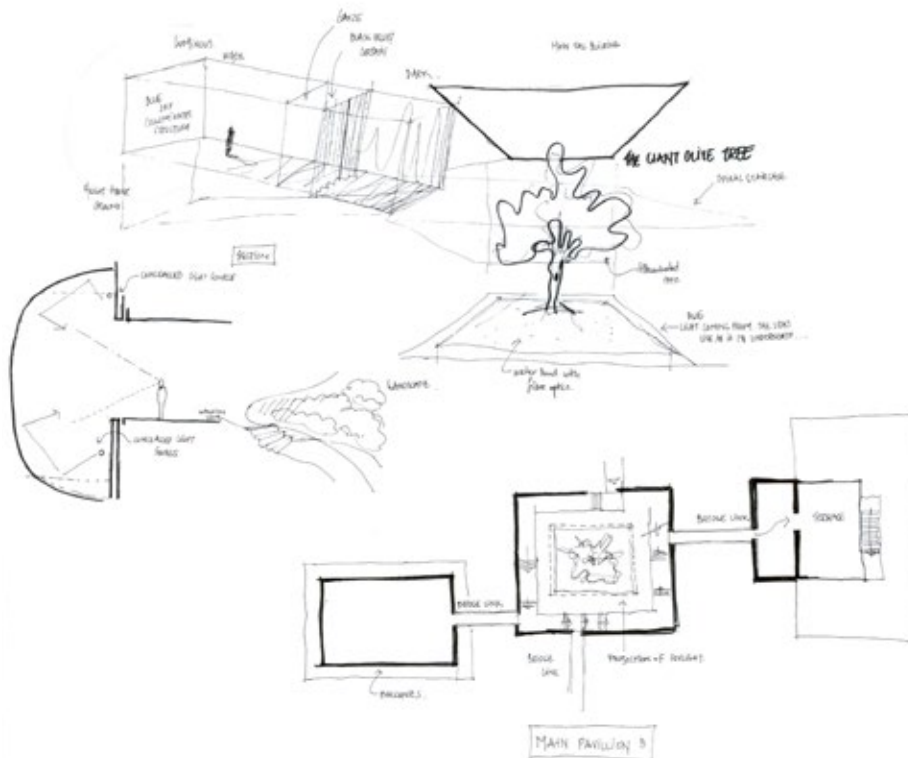
Dr Tamer El-Khouly, UCL, UK (now Ain Shams University, Egypt)

This research aims to collect empirical evidence on the nature of design by investigating the question: *What role do procedural activities (where each design step reflects a unit in a linear process) and contextual activities (an action based on the situation, environment and affordances) play in the generation of creative insights and formation of concepts in the reasoning process?* Using detailed ethnographic observations of designers working on architectural design tasks, and coding these using linkographs, the thesis shows how these activities can be identified through the structure of a linkograph, for better understanding the conditions under which creativity takes place. A joint approach of quantitative and qualitative analyses is developed to detect the role of evolving actions and structural units of reasoning, particularly the emergence of creative insights in the formation of concepts by judging the transformation of mental imagery and external representations in the sketching process.

The findings of this research are:

- (1) Procedural components are subsets in solving the design problem for synchronic concept development or implementation of the predefined conceptual idea, whereas contextual components relate to a comprehensive view to solve the design problem through concept synthesis of back- and forelinking between the diachronic stages.
- (2) This study introduces a new method of looking at evolving design critical actions by considering the time of emergence in the reasoning process.

Directed linkography compares two different situations: the first is synchronous, looking at relations back to preceding events, and the second is diachronic, looking at the design state after completion. Accordingly, creative insights can be categorised into those emerging in incremental reasoning to *reframe the solution*, and sudden mental insights emerging in non-incremental reasoning to *restructure the design problem* and *reformulate the design configuration*.



Sketches from a design experiment by Alkistis-Zoi Skarlatou © Tamer El-Khouly

Detailing for Tolerance: A Study of Architectural Detail as a Medium to Accommodate Permissible Errors of Building Production

Yashodara Gayathmi Hettiarachchi & Dr Milinda Pathiraja, University of Moratuwa, Katubedda, Sri Lanka

This research is a critique of architecture, through the eyes of an architectural detail and proceeds with a critical examination on the idea of 'detailing for tolerance', as a strategy to overcome crucial socio-economic, socio-cultural and socio-technical challenges that occur during the building erection and assembly processes. In evaluating this critical, pragmatic context of research, the study bring into forth some crucial intellectual investigations on the role of detail and detailing process in it, and specifically the relationship between detailing and the notions of "precision" and architects fear for "errors" and "failures". Subsequently, in response to building-specific economic, cultural and technical challenges, this study hypothesises the use of tolerances to be introduced to building design, as a way for mitigating failures and accommodating permissible errors. "Designing for tolerance" will eventually be a strategy for successful delivery of initial objectives, concepts and ethos of the design, in apparently difficult

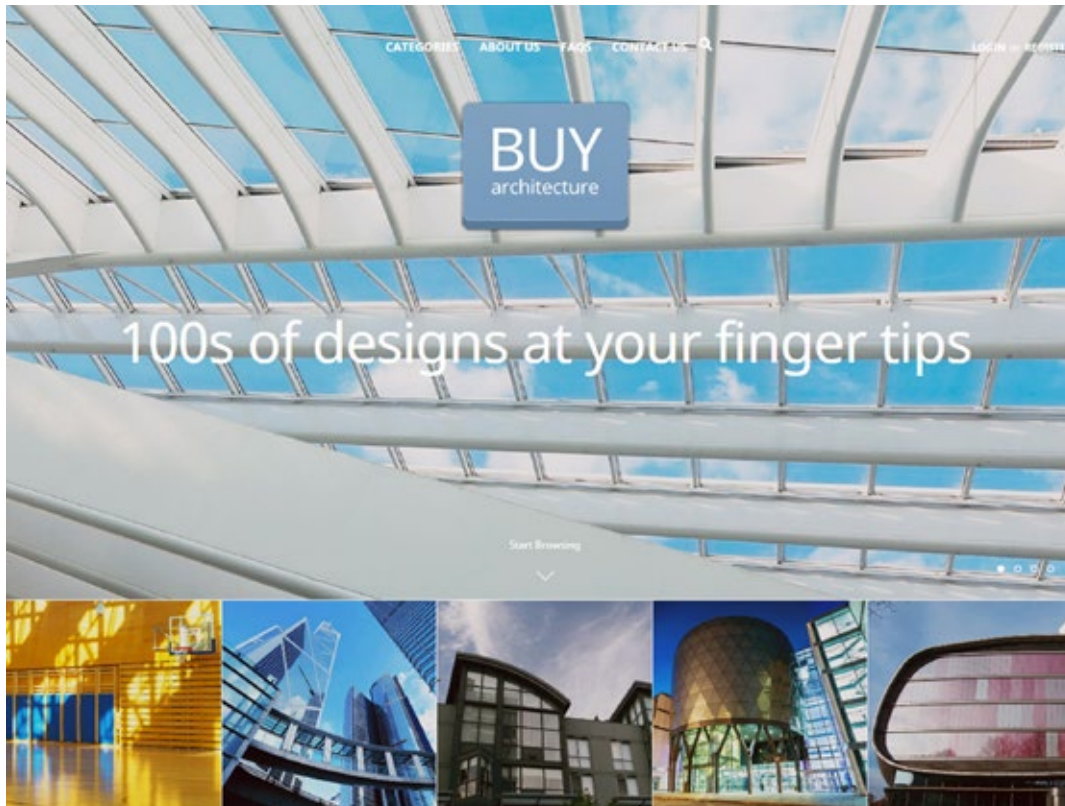
construction environments. The research embarks on a detailed inquiry about the dialectic that 'detail' is both a product and a process. The argument that the essence of architecture is spatial creation and detail is a tool for phenomenological expression of space, is agreed where the critical question is: how can such a notion of detail be implemented in challenging construction situations? Three case studies are evaluated, targeting how they have responded to the possible need of accommodating tolerances/ permissible errors, and what factors/conditions would they consider, to overcome the general turbulence in the technological environment. The study then extends an interpretation of such an approach to the definition of an alternative idea of 'detail'. Finally, reviewing the possibilities of embracing such a notion of detail – and detailing – within the local architectural practice, the study delineates a theoretical framework based on what it identifies as "six design strategies for tolerance".



Informal
construction in the
Kirulapone area
© Yashodara
Gayathmi
Hettiarachch

An Analysis of Architect's Income with Other Comparative Professionals and an Investigation to Establish If This Can Be Improved And If So How

David Spencer, Ian Atkinson & Ruth Holt, DSP Architects LLP, UK



Buy-Architecture
Homepage
© buyarchitecture.
com Ltd

The majority of Architects' practices are small and struggle to survive under the pressures of the market place. Over the last 20 years procurement has moved significantly to a preferred route via Project Managers inclined to use Design and Build procurement – this has resulted in a reduction in fee levels, the market share of fees and workload for Architects. Architects salary expectation and earnings per fee earner have been compared with legal, accounting and doctor professions. Architects are not only at the bottom but a huge distance behind. The lack of financial reward in practice, the loss of perceived value of the Architect role and the high cost of education and qualification are conspiring to impact on the future of the profession. What can Architects and their representative bodies do to address the position?

Architects websites do not reach out to potential clients and are still mainly portfolios – no commercial effort is made to convert a web visitor to be a buyer – client. A web based platform for selling architecture and promoting architecture (www.buy-architecture.com) has been devised – 60% of 45 Architect Practices visited in the development stage saw the value of the proposal and half signed up immediately. The beneficiaries will be Architects who can resell their designs enhancing their profits and turnover, Clients who can buy proven design saving procurement time and reducing project risk and the profession who can increase market share and reassert themselves in the construction hierarchy. Project completions and turnover through this new web site will be tracked and monitored.

Air-actuated Deployable Cushion Structures

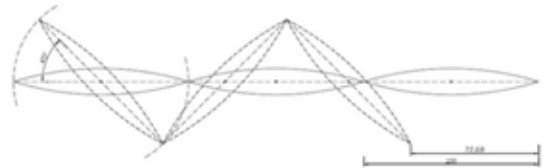
Dr Izis Salvador Pinto, University of Westminster, UK

Dr Rita Esmeralda Salvador Pinto, Universidad de Valencia, Spain

Movable and deployable lightweight structures with pneumatic cushions, which work not only as the cladding of the building but also as the actuator of the deployable structure, would have a wide-ranging application in architecture and engineering. Application of this form would improve assembly, erection and transportation of structures, as is the case with structures in outer-space. This research analyses the possibility of creating new constructions in a systematic and rigorous way by applying a mixed methodology created by the authors. The methodology is based on the 'Structural Combination Matrix' which combines two different structural systems for achieving numerous innovative constructions which are later studied and improved by the creation of physical models. The models allow the verification of the feasibility of the hypothetic elements of the matrix. This methodology is based on the principle that if a structure can be built in a

model and demonstrably works, equations can be subsequently derived to create a mathematical basis for the new type of structure. The research found that it is possible to actuate a deployable structure with the inflation pressure of air cushions, if the pressure is higher or equal to the actuation force needed to move the structure. For that reason, lightweight frames and structural members are recommended. ETFE cushions could be integrated on deployable structures to be used as a cladding and as the actuation system to self-deploy structures for architectural use. In the design of air-actuated deployable structures, the geometry, movement and use must be taken into account from the start. This study makes a significant contribution to understanding an innovative type of structure for architectural use which the authors have titled 'air-actuated deployable cushion structures'. The systems studied on this research could be applied, for example, in lightweight operable long-span roofs.

Air-actuated
deployable
cushion structure
© Izis Salvador
Pinto



Ordinary Architecture in Gaza

Salem Al Qudwa, Oxford Brookes University, UK



The project offers low-cost housing solutions for poor communities
© Salem Al Qudwa

In Gaza the final building products are grey concrete blocks, far below the basic standards which are often constructed elsewhere, due to the limited availability of materials. These ordinary buildings can hardly respond to the everyday, let alone urgent, community needs and climatic conditions and in long term waste water, electricity and resources. Even the construction process does not reflect current everyday practice. They subsequently disregard their sense of place especially in terms of the extendable family. Alternative environmental practices are required to reduce the use of natural resources and improve the building process, which lacks responsive collaboration with local people. On the other hand, architecture of the everyday is a growing interest for a number of architects looking to the everyday to escape the ever-quickening cycles of consumption and fashion that have reduced architecture to a series of stylistic

fads. A major concern is how this ordinary everyday language could help in the existing tectonic, spatial forms and realities within Gaza. Firstly, the paper studies visually, the existing ordinary objects around us and the buildings we live in. For the purposes of this study into the architectural culture of Gaza, the concept of architecture of the everyday is described. This is followed by a social and physical mapping of areas in the Gaza Strip that are identified to show the process of making, and to reflect on architecture of the everyday. In order to achieve the goal of this study a descriptive analytical method is adopted as one of the methodological tools to gather information about the everyday life in Gaza and to analysis the existing architectural situation through field investigations to different areas in the Strips' communities. This is followed by an analysis for a design-based case study.

Home Performance Labelling



Ben Derbyshire, Rory Bergin, Lucy Smith, Kim Vernau & Shelagh Grant,
HTA Design LLP, UK

Home Performance Labelling (HPL) allows customers to assess and compare whole life performance quality measures for new build and existing dwellings. We intend to continue to research and develop the modelling processes which will give customers a web based tool to compare key whole life performance measures for housing. This will help renters, purchasers and investors in housing to make decisions based on the quality of housing in the market. We are looking at providing data on living space, storage, natural light, cost of maintenance and repair, costs of ownership, energy and water use costs, amenity space and broadband quality all on one web based application. Our ambition is that HPL will be the 'Zoopla' or 'RightMove' for building whole life performance. HPL will benefit consumers of and investors in housing by giving them a tool to consider whole life performance rather than just location and price.

The label will list key whole life performance data enabling decision making because:

- Purchasers, renters, investors, occupiers and lenders will be able to determine mortgage or renting affordability;
- Valuers and Agents will be able to take account of whole life performance in property value;
- Landlords will be able to communicate and justify service charges.

To encourage a broad industry consensus we are forming a group - the HPL Consortium to help us establish the proper functionality of the tool, and guide us on how best to use it to improve performance and value.

Comparison Results (15)		Floor Area	Operational Costs	Maintenance Costs	Storage Area	Volume	Daylight	Broadband
	Plevna Street House £1,500,000 4 Bedrooms £10,970/m ²	138.00m ² Floor Area	£2316 pa Operational Costs	£2091 pa Maintenance / Replacement	4.90m ² Storage Area	379m ³ Volume	4.58% Daylight	12.2Mb Broadband
Performance Benchmarks		123m ² Ⓢ	£2361 pa Ⓢ	£2778/m ² pa Ⓢ	4m ² Ⓢ	358.8m ³ Ⓢ	2.0% Ⓢ	14.7Mb Ⓢ
	Stewart Street Flat £700,000 3 Bedrooms £7,527/m ²	93.00m ² Floor Area	£1798 pa Operational Costs	£2638 pa Maintenance / Replacement	1.00m ² Storage Area	251m ³ Volume	2.01% Daylight	12.2Mb Broadband

© Home Performance Labelling

Straw and Order: A Sustainable Practice for the Future of Straw Construction in the UK

Alanah Honey, Newcastle University School of Architecture Planning and Landscape, UK



Building a ModCell wall panel
© ModCell

Straw bale construction is on the brink of becoming mainstream in the UK. While alternative building materials have been used on a small scale within ecological movements, to counter unnecessary consumerism and provide more 'sustainable' building methods, truly sustainable building practice is not yet the norm. Sustainability is an exploited, overused, and often misused term. However, as a renewable by-product of the food industry, straw is inherently 'sustainable' as a raw material. Construction methods and the buildings produced have also been proven to be low energy, in comparison to other building materials. Straw has been valued for its sustainable ideals, in alternative practice for bespoke 'green living' projects. However, in the last 20 years it has also begun to be used in 'normal' building practice through companies such as ModCell producing prefabricated straw panels. These prioritise the material properties

of straw but adapt it for use in modern construction, to some extent normalising it as a building material and allowing it to move from bespoke 'eco' projects into the mainstream building industry. 'Straw and Order' analyses the two existing types of practice, highlighting their incongruity and arguing that this division is preventing straw being used to its full potential as a building material. The research has been conducted primarily through visiting and participating in the construction of straw buildings, interviewing the UK's leading straw experts and studying published works on straw construction and the theory of technology. It has already been influential in the material selection of a design in the North East. 'Straw and Order' proposes a framework for the development of straw construction based on the ideals of natural building, whilst using the advantages of industrial practice and adopting a pre-fabricated panel system.

The Use of Integrated Design and Dynamic Simulation Modeling In Creating a New Regulatory Strategy for High Density Residential Projects

Raffaele De Angelis, HLM Green Build, UK



Sutton Estate
Chelsea
© HLM

The simplified methodologies adopted by the UK to benchmark and make compliant residential building energy consumption and Carbon Dioxide emission cannot accurately represent the complex integration of elements that influence a building's performance. They result in a lack of comprehensive information, which reduces the optimisation process and hinders the ability to explore and apply advanced and innovative design. This incurs bolt-on "greenwash" solutions that substantially fail the Carbon reduction hierarchy. Solutions and strategies that rely on the integration of different active and passive aspects can only be properly represented through a Dynamic Simulation Modelling (DSM) process. The right information can only be predicted by dynamically integrating, in time and space, the behaviour of different building elements, components and systems. The performance/prediction gap between simplified and DSM procedures can be particularly evident for complex, high density residential projects. The dynamic approach can take into account integrated factors such

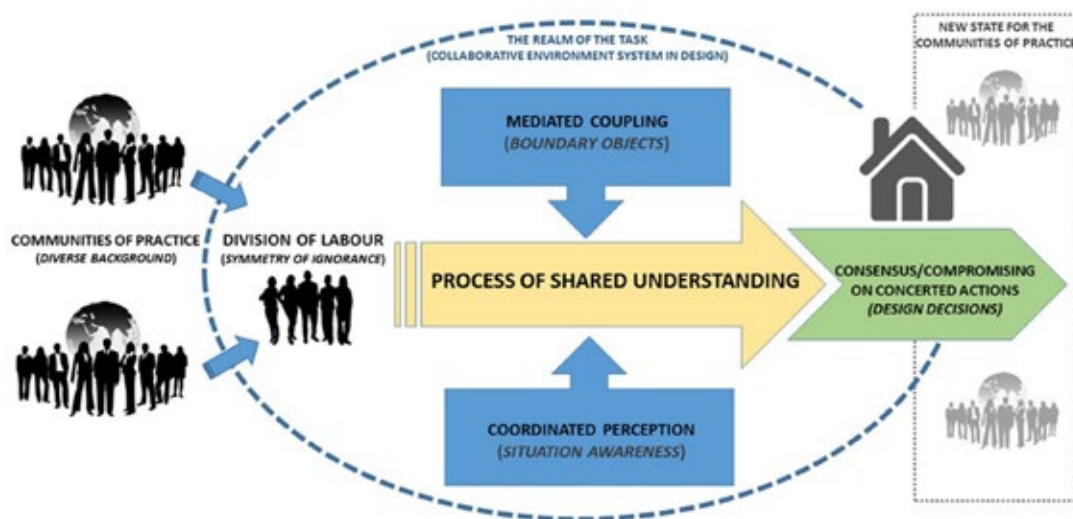
as the complexity present within a dense development and its interaction and role within the urban context; the variegated distribution of environmental conditions, and the interaction of residential with different building typologies. This paper illustrates the benefits of a proposed new regulatory process for application in high density urban residential development using a DSM methodology in a way that promotes the benefits of high quality design. The DSM method simulates in detail the integration of passive and active systems and provides performance predictions for the different building elements as well as each specific residential unit at different times of the year. It then illustrates how the DSM allows better control of Indoor Environmental Quality aspects and how the detail predictions can effectively inform design decisions and strategies. Results are compared with the Government Standard Assessment Procedure (SAP) for UK dwellings. The paper then explores different methodologies, including allowing the implementation of DSM procedures within the SAP.

Shared Understanding and Collaboration at Early Design Stages in AEC

Danilo Gomes, University of Huddersfield, UK

Complexity in the built environment has been related to product and processes in an attempt to properly approach the management of collaborative delivery systems. However, the complexity of factors of the social interplay involved in collaborative systems for construction enterprises has not been explored in depth. Low levels of collaboration are identified especially at early design stages, where the collective design creation is hindered by the lack of ability of the team to build shared understanding, embracing a multitude of expertise in the task. In this context, the research focused on how the concept of shared understanding can potentially support better collaboration at early design stages. The perspective of collaborative design as a social system bring into focus the process to build shared

understanding for concerted actions between team members. Preliminary findings indicate that this process combines actions toward mediated coupling and coordinated perception, in a situation of division of labour in the collaborative design task. The study was developed based on a synthesis of the literature, building upon definitions of collaboration and shared understanding in design and construction research to build a model of shared understanding in collaborative design. The conclusions present main concepts and draw attention to some misconceptions that still hinder the process of shared understanding for collaboration. As an output, this research contributes in developing a design management strategy that addresses the complexity of early design stages as a socially constructed task involving a multidisciplinary team.



Shared
Understanding
Model
© Danilo
Gomes



Makoko which is not particularly 'Venice'
© Adekanmi Ojuri

History and Theory

Submissions were invited from historians, theorists and practitioners whose work has relevance to the history and theory of the practice, culture and profession of architecture most broadly conceived.

- Historical research of direct relevance to a project, e.g. conservation plans and reports
- Cultural studies relating to architecture, professionalism and the built environment
- Histories of construction, science and technology
- Historical and/or theoretical research on place, space and urban planning
- History and/or theory of practice and praxis, including professionalism, architectural education, procurement and non-design aspects of architectural practice

Asmara – Africa's Modernist City: UNESCO World Heritage Nomination

Edward Denison, The Bartlett School of Architecture, UCL, UK
Medhanie Teklemariam & Dawit Abraha, Asmara Heritage Project, Eritrea



Combination of past and present to convey the life of a building in Asmara over time. The Ministry of Health (2014), formerly the city's police

In January 2016, the State of Eritrea submitted its first ever application to UNESCO for inscription on the World Heritage List (WHL). The nominated site was the country's modernist capital, Asmara. The 1,300-page Nomination Dossier represents the distillation of nearly two decades of collaborative research by professionals from wide range of disciplines in Eritrea and overseas, supported by many national and international government agencies and non-governmental organisations. Asmara is an outstanding example of a colonial capital that bears witness to the universal encounter with modernity in the twentieth century and consequent postcolonial experiences. The historic urban landscape embodies in a whole city the unity of innovative urban planning and modernist architecture combined with local natural and cultural conditions. An urban planning process based on functional and racial zoning demonstrates the Italian colonial response from the late-nineteenth century to the challenges of modern urban requirements in a highland African setting. The architectural character

exemplifies a period of intense development in the 1930s that coincided with the global proliferation and artistic apogee of pre-war modernism and its various forms. The research challenges conventional perceptions based on universalistic norms, inviting a reassessment of how colonial heritage and modernism are perceived beyond the Eurocentric gaze. Eritrea's decision to conserve Asmara's early colonial era architecture represents a profoundly different attitude towards architectural heritage and its interpretation and treatment compared with many other post-colonial settings. Asmara's nomination also presents an opportunity to encourage critical reflections on cultural relations and heritage globally, and to promote stability and prosperity locally. The three main aims of the research are: to implement the necessary measures for managing the conservation of Asmara's heritage assets; to ensure the city's successful inscription on the WHL; and to contribute to redressing the comparative under-representation of African and modernist sites on the WHL.

The Texture of Politics: London's Anarchist Clubs 1882-1914

Jonathan Moses, Royal Holloway University London, UK

This research explores the history of London's anarchist clubs in the late-Victorian and Edwardian periods. It focuses on three prominent examples: the Autonomie Club, at 6 Windmill Street in Fitzrovia, the Berner Street International Working Men's Club, at 40 Berner Street, in Whitechapel, and the Jubilee Street Club, at 165 Jubilee Street, also in Whitechapel. In particular it aims to recover the 'architectural principles' of the clubs, reconstructing their aesthetic choices and exploring their representations, attempting, where possible, to link these to their practical use, organisation, and political ideology. In order to make this case it draws from newspaper etchings, illustrations, reports in the anarchist and mainstream press, court statements, memoirs of key anarchists, letters, oral interviews, building act case files and building plans. It concludes that the clubs – all appropriated buildings subsequently restructured for new use – were marked by the attempt to present an exterior appearance of respectability,

which belied an interior tendency towards dereliction and 'deconstruction'. Although it acknowledges the material constraints informing such a style, the paper argues, by way of comparison with other political clubs of its kind and the tracing of anarchist aesthetic influences, that this was not incidental. Instead, it represented a particular political aesthetic, which reflected the influence of the nihilist movement in its antagonism toward bourgeois norms, and which facilitated the democratic, anti-authoritarian principles of anarchist ideology. The paper further explores some of the contradictory features of the clubs' interior design; in their apparent veneration of movement elites, and their ambivalent relationship with gender equality. Overall it aims to show how architectural history can offer an added dimension to the social history of radical politics, and in turn how social history can invest even apparently mundane architectural details with political significance.



Autonomie Club -
The Graphic -
1894 - pt 4
© The British Library

Spotless Lilies and Foul Smelling Weeds': Architecture and Moral Cleanliness in Victorian Magdalen Convents

Kate Jordan, Bartlett School of Architecture, UCL, UK

I have undertaken a detailed analysis of the architecture of Victorian magdalen convents as part of my broader research into religious houses in Britain, built between the Catholic Emancipation Act of 1829 and the present day. This is a building type that has been overlooked by architectural historians at a heavy cost – as communities have dwindled, unlisted houses have been redeveloped and demolished at a rapid pace. A root cause of this research gap has been the failure by historians to interrogate assumptions about this complex architecture and look beneath the skin. My own experience of researching religious houses has required considerable self-reflection as I continue to encounter and step beyond the frontiers of my thought processes and imagination. I embarked on the research on women's historical role in the built environment and with a view to constructing a feminist account of nuns as designers and builders with a

set of pre-conceptions about convent architecture – buildings that were created by women and for the exclusive use of women under largely autonomous conditions. These assumptions were quickly challenged by the primary sources – what I had taken to be evidence of empowerment was revealed to be a paradoxical picture of women frequently using their authority to etch oppressive ideologies into their architecture. My work on magdalen convents in particular has revealed the extraordinary ways that women shaped their buildings – seeking inspiration in unexpected places and appropriating secular philosophies. The cornerstone of my research has been the voices, both contemporary and historical, of the women who made these sites – their words have provided rich ways of understanding the theology and culture of women's religious communities and cast new light on their unique architecture.



Penitents and sisters
at St Mary's Convent,
Streatham, c1880s
© Generalate of the
Poor Servants of the
Mother of God

Reimagining Tradition: The Sompura Hereditary Temple Architects of Gujarat

Megha Chand Inglis, Welsh School of Architecture, Cardiff University, UK



A carving karkhana (factory) in Barsana, Uttar Pradesh, India
© Megha Chand Inglis

By examining the shifting working practices of the Sompura community of hereditary temple architects of western India my thesis argues that the nature of their work culture invested in their architectural and textual production is far more critical, innovative, heterogeneous and fluid than how it is portrayed in post-colonial knowledge located within the disciplinary bounds of architecture and art history. Using 'cultural translation' as a framework of analysis as explicated in postcolonial studies, the thesis highlights their creative negotiations and struggles with modern spheres of life between the late 19th and early 21st century. These query notions of a 'fossilised' tradition viewed through historical frameworks; the agency of 'ritual' untouched by capitalist processes and binary oppositions such as 'east vs west' or 'traditional vs modern'. My research highlights key moments of translation, transculturation and transformation in encounters with modern historical consciousness, global economy and changing patronage. The publications of Narmadashankar M. Sompura (1883-

1956) and P.O. Sompura (1896-1978), are analysed as transformations of both colonial notions of antiquity and indigenous practices. The restoration of medieval ruins of Ranakpur and Dilwara temples in the mid-twentieth century by master builder Amritlal Mulshankar Trivedi (1910-2005) are explored as negotiations with objectified ideas of conservation and history. The contingent relations between practice and codified knowledges are explored through oral histories concerning transnational case studies in the UK, whereas a variety of affects transform capitalist processes and relations in modern carving factories, deploying a range of hand intensive, machine and digital technologies for a global dispersal. Through this unchartered empirical investigation, which uses a variety of extra disciplinary methodologies, the thesis demonstrates that the Sompuras, believed to be carriers of a long dynamic architectural tradition, have creatively and dynamically negotiated change by transforming not only modern and global paradigms but also their pre-existing cultures of work.

Birmingham: The Architecture of Two Ecologies

Tom Keeley, Bartlett School of Architecture, UCL, UK



Junction 19
Intersection of
A38(M) and M6
© Tom Keeley

This study takes Reyner Banham's *Los Angeles: The Architecture of Four Ecologies* and uses it as a lens for re-viewing Birmingham, England. It borrows two of the ecologies Banham defined in *Los Angeles* – The Plains of Id (the flatlands between the mountains and ocean) and Autopia (the freeway system) – and overlays them in a parallel context in Birmingham. It uses the definition of ecology in a Banham sense: describing the context in which works of architecture are found; and also in a new structural sense: describing the context in which Banham, his method, and his *Los Angeles* are found in relation to Birmingham. It wants to know what Birmingham becomes through Banham's *Los Angeles*; and in turn, what we might understand of Banham, his *Los Angeles*, and his method, through Birmingham. The report is structured through a montage of *Los Angeles* and Birmingham, of memory and lived

experience, all of which begin to blur at the edges. It borrows Banham's structure and methodology to look back: a device used to refract Banham, his method, and his *Los Angeles*, through Birmingham. Both Birmingham and L.A. are viewed through a layering of different positions of urban experience. These positions, seen at different speeds, at different times, and from different vantage points, allow us to see both cities anew. This study argues that, like the *Los Angeles* of 1971, Birmingham is a city much misunderstood. It takes architecture as the starting point for studying the wider ecology in which architecture is situated. It argues that our understanding of architecture is limited without its context; and that overlooked, everyday, and unsung architectural histories, such as those in Birmingham, are just as valuable as those by named architects in a more traditional hierarchy of architectural history.

Dreamland Cinema, Margate

Fiona Raley, University of York, UK

This study was undertaken as part of the MSc in Building Conservation at The Weald and Downland Open Air Museum validated by the University of York. It is the response to the module on the conservation of 20th century buildings. The focus of the study is the Dreamland Cinema in Margate, Kent, which is listed grade II* and currently vacant following a compulsory purchase by Thanet District Council in 2013. The building is included in the Historic England Buildings Heritage at Risk Register. The main aims of the research were to provide an assessment of a 20th century building of historical interest and analyse its style, construction method, building materials and procurement. The results of the research provided a particular focus on the socio-economic context of the building and its architecture, in respect of the tangible and intangible nature of its cultural significance.

It includes an assessment of the heritage values which inform the significance. The cinema was built in 1935 and is one of the early purpose built cinemas within an entertainments complex; a predecessor to the mid twentieth century Odeon cinemas subsequently built in cities across Britain. Its design by Leathart, Granger and Iles represents a stylistic evolutionary change in aesthetic for the practice and for the genre of cinema design. There was a move from Art Deco to streamlined functionalism as architects took reference from the continent between the First and Second World Wars. Today, the cinema is a forgotten architectural icon with much of its original interior lost. The building was well published and documented when it opened and there is a substantial body of drawings and historic record photographs to inform conservation and restoration.



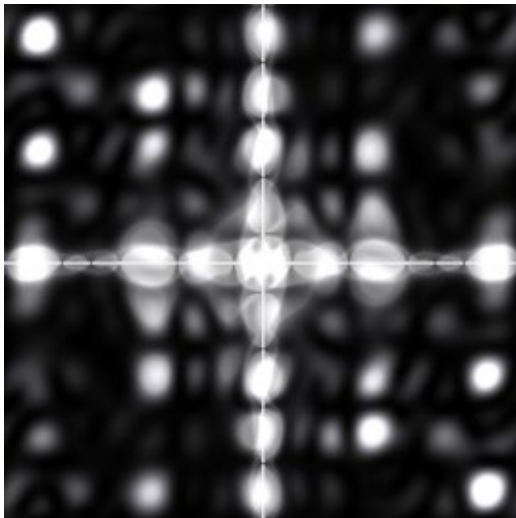
Dreamland,
Margate, Kent
by Iles Leathart
& Granger,
photograph by
Arthur George
© RIBA
Collections

Upgrading the Paradigm – Visual Regimes, Digital Systems and the ‘Viewed’ Urban Surface

Dr Linda Matthews, University of Technology Sydney, Australia

The image of the contemporary city is constructed according to the geometric logic of the digital data array and mediated by a range of visioning technologies. Departing from the Cartesian grid's dominant influence upon the representation and design of post-Renaissance urban form, this new geometric logic instead uses an arrangement of pixel adjacencies to transmit image data as colour and contrast. In today's 'envisioned' urban space, this qualitative data is the principal pictorial mechanism of spatial depth and therefore introduces a new paradigm for the design and construction of the architectural surface. The research method focuses on three areas of digital data transmission and image assembly relating to colour, contrast and shape detection to establish pattern templates for the formal translation of digital geometry into the 'viewed' surface. Operating as 'hyper-pixel' façade arrangements, the transposed patterns affect the transmission of image data by disrupting the camera's technical pathways and its

ability to capture visual data. The method is then to link these new assemblies numerically to the optical effects of the built surface. Practical tests undertaken reveal that the application of digital-based patterns to the 'viewed' architectural surface can either reorganise its visual prominence or directly disrupt its legibility. This instigates a new type of architectural agency that resists current strategies of image normalisation embedded within the procedures of visioning technologies. The research therefore aims to develop new generative techniques that draw directly upon digital geometry and digital image-making techniques to describe the assembly and structure of the architectural surface in contemporary 'envisioned' urban space. It aims to suggest how the reinstatement of architectural agency might occur within the new digital frame. Its purpose is also to open new disciplinary discourse about the contribution of digital geometry and the digital platform to the contemporary tools and techniques of architecture.



Fraunhofer
diffraction pattern
©Linda Matthews

Architecture in a Crisis of Identity

Prof Johnny Rodger, Mackintosh School of Architecture, UK



Burns
Monument
Alloway
© Johnny
Rodger

Scott monument
© Johnny
Rodger

Wallace
monument
© Johnny
Rodger

With the Brexit vote in the EU Referendum and the close run vote in the Scottish Independence Referendum of 2014 we appear to have entered into an historical era dominated by the politics of identity and nationalism. Architecture as a discipline and practice sometimes seems far removed from that political debate and unable to contribute to any discussion on identity politics. Yet that was not always the case. In the nineteenth century the design and construction of a particular type of building – a ‘hero building’ – not only engaged expressly with these issues, but drew a broad cross section of the public into participation in the design, promotion, fund-raising, opening and celebration of these particular structures. The ‘hero building’ is a transnational 19th century model (e.g. Bismarck Towers, Germany and Lincoln Memorial, Washington) but was an especially prominent phenomenon in Scotland. Well-known Scottish examples include the Scott Monument in

Edinburgh and National Wallace Monument in Stirling, and this research examines the meanings of the typology of these buildings, the sites in which they were built, the campaigns organised to get them built, and roles they played in 19th century Scottish society. It is important to note these monuments are buildings and not simply statues or otherwise sculptures, though they often contain a statue or sculpted element of the eponymous hero. The research examines what it means to raise a building to a poet, a politician or a freedom fighter, what are the symbolic meanings which are contributed to the ‘identity’ and other political debates by such a building, and the range of uses to which such a building is put. Most importantly it studies why these buildings were built at that specific period, and whether they can contribute anything to current debates on identity in Scotland, UK and the wider world.

Culture and Representation of the Man-made Landscape: Building the Image of American Territory

Dr Carlos Santamarina-Macho & Juan Luis de las Rivas Sanz,
University of Valladolid, Spain



The American landscape ideal in the post-Fordist era
© Google Map Data

The research analyzes the history and connections between material practices, visual representations and the production of theory in the imagination of United States landscape, in a period that expands from mid-nineteenth century up to the seventies. More specifically, the research suggests that certain political-economic forces of spatial transformation produce territory in a way that generates and is at the same time reinforced by certain modes of visualization which in turn shape collective imaginaries and, particularly, the development of landscape theory. All in all the research fuses a (material) history of spatial change, a (cultural) history of photographic representation and a(n) (intellectual) history of ideas and discourses about landscape, focusing on three stages: the frontier and the imagination of wilderness in the 19th century; state planning, territorial

restructuring and the re-figuration of rurality in the New Deal; and the generalization of suburbia and the discursive and visual production of a new vernacular in the postwar period. This argument is developed by examining the forces of spatial production in each context and then by confronting diverse strands of photographic representation and particular theories (or thinkers) of landscape. The parallel narrative shows the visual and spatial context through which the theoretical discourses about landscape emerge, and the links between theory, representation and material practices of production of space. The research provides a bridge for framing and understanding, historically and culturally, both contemporary territories, emerging theories about landscape and landscape architecture practices.

An Exploration of Fascist Intent: Le Corbusier, Adriano Olivetti and Jan Bata

Lavinia Tarantino, University of Liverpool, UK

During the “interwar period” two small-scale industrial businesses grew into international enterprises: the Bata Company in Czechoslovakia and The Olivetti Company in Italy. Both established strong urban programs in an effort to create new model societies revolving around industrial production. The architect Le Corbusier collaborated with these companies between 1934 and 1937. His desire was to contribute towards the urban transformations carried out by the enterprises and to test his own urban and social theories, developed as a response to the urban and social dislocation experienced in Europe during the

interwar years. Drawing upon the recent discourse which debates the extent to which Le Corbusier was associated with fascism, this research critically analysed his collaborations with Bata and Olivetti to discover whether fascist persuasions were evident in his work. A thorough analysis of unpublished archive material shed light on the social and political tendencies shared by Le Corbusier, Olivetti and Bata. The picture which emerged is considerably less black and white than the recent discourse on Le Corbusier's politics would lead one to believe.



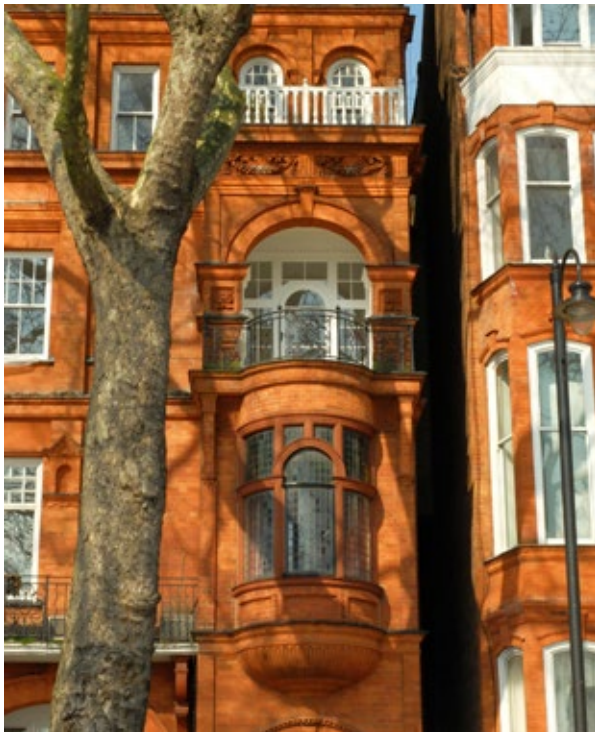
Le Corbusier
in his Pavillon
des Temps
Nouveau by
Monte L. Bryer
© RIBA
Collections

Chelsea Court Heritage Study

Anna Sullivan, HTA Design LLP, UK

A very successful architect throughout a career during the later 19th and early 20th Centuries responsible for many buildings in the City of London emerged through research into a Chelsea mansion block. He was also Jewish and made a positive contribution to society through his work, but is today forgotten. Most of his works have been lost to war and subsequent development, though several good examples remain of which the building in question is one. The rare find of an interview for the Architectural Press at his professional peak, found at the RIBA British Architectural Library, provided an insight into this Architect's approach to the profession that could be tested against the building being studied. Following good conservation practice a deeper understanding of the history of this building in a prominent location was sought to help engage with residents and other stakeholders and inform design

proposals for alterations. It was the first research work done into the history and development of the building and would be presented in a Heritage Study to accompany a planning application. The research proved to be engaging throughout. An Assessment of Significance was written after understanding the physical fabric and the reasons for its existence which emerged from inspection and research. Archive sources proved most fruitful but online resources were also used to inform and direct the process of gaining understanding. The findings were written to be engaging for a non-professional audience reading the document through the online planning portal by avoiding jargon and giving the prose a good pace that was concise and readily comprehensible. Based on the findings the document concluded calling for further research to be carried out into the Architect responsible for the building.



Chelsea Court
© Anna Sullivan

The Practice Turn in Architectural Studies: Towards a Cautious Pragmatism?

Dr Isabelle Doucet, The University of Manchester, UK



Brussels.
View from the
Ursulines Square.
© Isabelle Doucet

In response to recent debates in architectural and urban theory around the agency and locus of critical action, this project starts from the ambitious question as to how architectural theory can better contribute to the formulation of a critical agenda for architecture. The project seeks to answer such a question, firstly, through proposing a novel method of critical inquiry. Rather than through conceptual and ideological categorisations, it studies how architecture and criticality work through-practice; within specific circumstances. Thus, secondly, inspired by pragmatist-relational philosophies, the project starts from a city's specificity and complexity and resists drawing conclusions from cities 'in general' or through comparative study. Brussels, a complex city with a turbulent architectural and urban past, forms

a compelling case. Through studying a series of critical actions and tools, which occurred in Brussels' architectural and urban culture after 1968, the project tests the potential of criticality through-practice. Thirdly, the project proposes an expanded definition of architecture and welcomes a colourful parade of actors into the historiography of a city. Brussels thus emerges as fabricated through architects, urban policy makers, activists, social workers, and citizens; buildings, plans, and policy documents; but also mundane practices and constructions; even derogatory words and bulldozers. Through such threefold approach, this project offers a timely contribution to (critical) architectural theory and to recent scholarship on the critical reappraisal of architectural debates from the 1960s through to the 1990s, in Brussels and beyond.

The Fair Line and the Good Frontage: Surface and Effect

Dr Stephen Walker, University of Sheffield, UK



Jumbo Circus,
Boston, May 2016
© Stephen Walker

This essay considers the boundary surface of the travelling fair, which is organized by a plan-drawn datum known as the 'fair line.' Focusing on fairgrounds in England, it explains the planning and operation of the fair line over the last two centuries, its historical emergence and contemporary manifestation, and the related changes in the material, technological and cultural components of the attractions that form the boundary surface. In tandem with this historical trajectory, the essay also introduces a range of theoretical work from architecture and philosophy in order to support a more in-depth consideration of the operation of the boundary, or what Andrew Benjamin has called the 'surface-effect.' Adhering to Benjamin's 'theoretical history', the essay brings together instances of archival, built and written work that chronological history writing would leave apart: it revisits nineteenth century architectural interest in the separation of plan and elevation, and

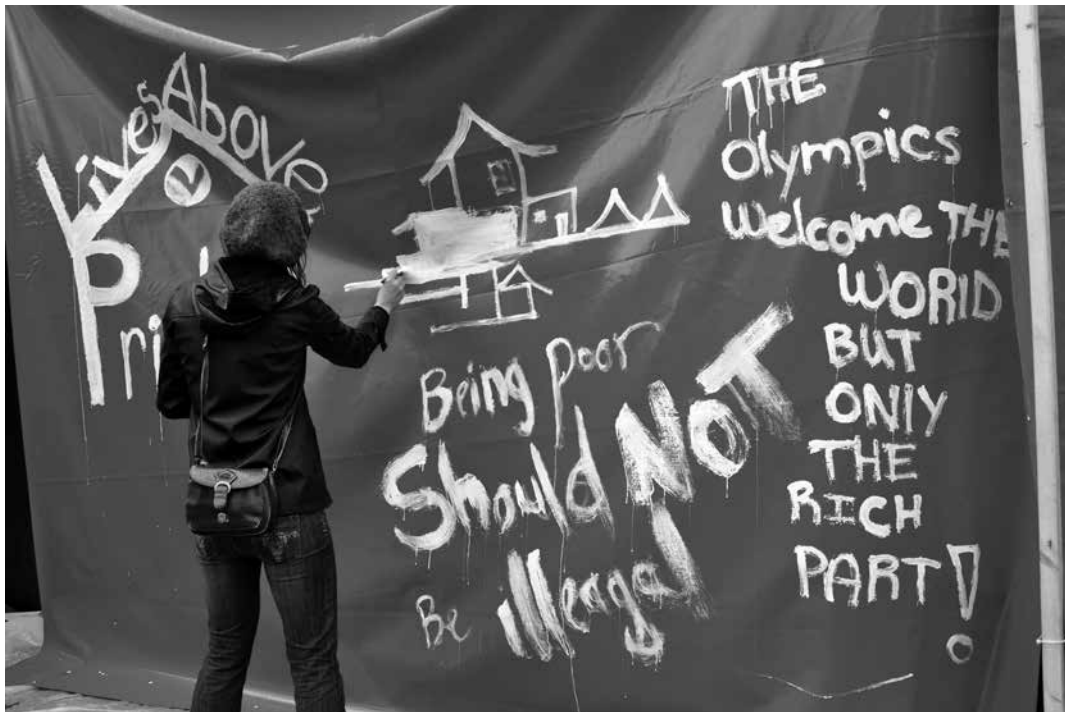
in the materiality of surface enclosure and surface treatment, through a renewed contemporary interest in surface. The essay argues that the fairground's boundary surface operates as an 'exception' that both Ruskin and Semper acknowledge within their influential (but competing) theories of architectural surface. Although their architectural and philosophical considerations are generally based on examples of 'high' art and architecture, the essay demonstrates the extent to which their work can help to establish an understanding of the 'low and vulgar' (Ruskin) objects and spaces of the fairground. The 'exception' helps to explain how this enclosing surface engages both the individual and collective spectator in different perceptual relations than conventional examples of surface, and why no 'first order' theory of surface is possible. This work forms part of a longer project on the architecture of travelling street fairs.

Opposing the Olympic City: Spatial Practices of Prefigurative Action

Dr Jilly Traganou, Parsons School of Design, United States

Known as events that place a host-city on the map, the Olympic Games are also a source of dissensus and concern. This research examines the ways the Olympic City is being resisted by urban movements, or other forms of collective action through spatial practices of prefigurative action. The paper introduces the notions of insurgent and radical habitus as two forms of spatial practice that involve creative engagement with material practice and foster new modes of communal life. In it I focus on two examples of recent anti-Olympic action. The Olympic Tent Village, an encampment that was part of the protest against the 2010 Olympics in Vancouver by the Olympic Resistance Network, was an activist project that involved collective inhabitation in public space. Its participants both demanded the authorities' response to the issue of homelessness that was accentuated by the Olympics, and expanded the potential of the protest camp as a radical form of

collective inhabitation. Clays Lane Live Archive was a community-building project organized by artist Adelita Husni-Bey in the context of London 2012. It was conducted in collaboration with residents of the Clays Lane Cooperative, whose building was demolished for the sake of the new Olympic park. This multifaceted project involved commemoration and archival deposition as an act of community recuperation and dissent, and took place in interstitial spaces rather than in the public realm. Based on Wini Breines' concept of prefigurative politics, the idea of "radical habitus," coined by sociologist Nick Crossley, and James Holston's writings of "insurgent citizenship," I analyze and compare these two forms of habitus, as they relate with material practices of the everyday, situated in different urban spatialities. I see both as powerful tropes of dissent that propose alternative modes of habitation and spatial praxis, while also help prefigure a desired society to come.



Olympic Tent Village encampment © Stephen Hui

Clues of Self-sufficiency

Stefan Cristian Popa, Architectural Association, UK (now Foster+Partners, UK)

The topic of this piece of research emerges from the concept of 'self-sufficiency', tracing it back in the Norwegian history to understand its contribution to the formation of a particular relation to the natural environment. Communicated in the case of this study mainly through architectural drawings, this relation seems to be part of a cultural manifestation influenced by the geographical positioning of the Scandinavian country. The object of study is the 1994 Winter Olympic Games in Lillehammer. The architectural design process of this event will be discussed, as it stands for a symptomatic expression of self-sufficiency and represents a turning point in the history of the Olympics, one of increasing awareness of the natural environment. The discussions around the green manifesto of the United Nations, which caught up in intensity one year before the assignment of the Scandinavian town to host the

XVII edition of the Games, will cast light on the internationally motivated ambitions towards efficiency and sustainability. The critical role of the local in the political focus on ecology will be traced within the graphic representations of the event. To this aim, the writings of Christian Norberg-Schulz will be brought in to assess the impact of what he calls the international 'eco-crisis' upon the organization of the 1994 Winter Olympic Games. It will be argued that the Norwegian self-sufficiency attribute, visible in the drawings and sketches for the 1994 Winter Olympic Games buildings at every scale, was strategically projected into the world through the media mechanisms of the International Olympic Committee. To this aim, graphic clues indicating a search for the optimal relationship between the architectural object and the land it occupies, will be traced and examined.



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Primitives in Vernacular Bulgarian Barns as Reference Source for New Bulgarian Architecture

Rossitza Bratkova, University of Architecture Civil Engineering and Geodesy/ TTHR
Aedes Studio, Bulgaria



Freestanding barn,
stone and wood,
Mogilitza, Smolyan
© Rossitza
Bratkova

This article is aimed at raising the interest in the architectural qualities of the vernacular Bulgarian barns and how they can be of use for contemporary design. The article is articulated into four parts: 1. The Issues of Architecture Today – an analysis of the reasons for the contemporary crisis in post-socialist Bulgarian architecture regarded in a more general European context. 2. The Present Day Concept of Beauty – an attempt is made for a contemporary redefinition of beauty in architecture which is in compliance with the issues of our time 3. In Praise of Barns – An initial typology is proposed as well as

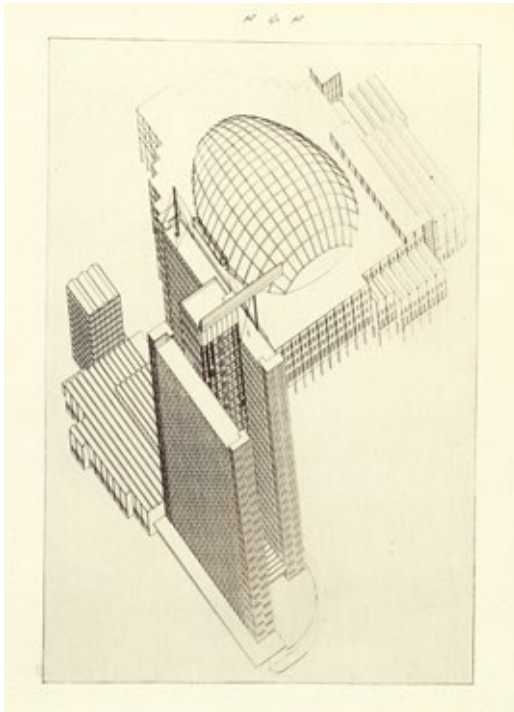
several case studies from which some major design principles are extracted. Vernacular barns are explored in the light of the present day understanding of beauty in architecture. 4. Present Day Interpretations of Barns – the design principles of the barns are then proposed as the basis for creating a new urban vernacular architecture. Then an outstanding Swiss design is regarded in its relation to a traditional space in the Jura region. In the end four examples from the author's practice are discussed according to the way they implement the principles of the vernacular Bulgarian barns.

Strata of Enunciation or the Constructive Diagrams of Hannes Meyer

Alexandra Vougia, Architectural Association School of Architecture, UK

The submission revisits the work of the Swiss architect Hannes Meyer (1889–1954) in an attempt to reframe it via a more intricate understanding of the concept of the “diagram”; an understanding that goes beyond its limiting conception as a representational tool and thus discharges Meyer’s interwar work from its canonical classification as rigidly “functionalist”. The paper focuses particularly on Meyer’s experimentation with co-operative form developed during the years 1924–25 and culminated with his article “Die neue Welt” (“The New World”) published a year later. In this article, Meyer defended the correspondence between social and spatial production by suggesting an expansive notion of the “diagram” that could absorb these different levels of enunciation articulated by architecture. As the paper argues, the “diagram”

was for Meyer a mechanism of representing, on the one hand, the contemporary means of production – inasmuch as it functioned as an index of these – but, at the same time, a mechanism of constructing: it articulated the programming and re-organisation of the building – in its literal sense – and thereupon social production. The paper considers “The New World” as a categorical manifesto on modernity and its modes of existence: an integral counter-ideological project which began from a close reading of the dominant modes of production and which ultimately speculated on the constitution of the modern subject and its existence within forms of collective praxis but, most importantly, the ways in which the seemingly inflexible forms of architecture can capture the dynamic flows of everyday life.



Drawing for the League of Nations architectural competition, Geneva by Hannes Meyer and Hans-Jakob Wittwer
© RIBA Collections

Commonwealth War Graves Commission Conservation Management Plans

Heather Jermy, Jon Wright, Hattie Mulhearn, Michael Morrison & Brian Anderson,
Purcell, UK

Prof Michael Turner & Noah Hysler, Bezalel Academy of Arts and Design, Israel

Rachelle Wiener, Tamar Alon & Rachelle Wiener, Landscape & Architecture Ltd, Israel



Historic photograph
(exact date unknown,
presumed 1930s)
of the Records Room
at Jerusalem War
Cemetery
© Commonwealth
War Graves

The Commonwealth War Graves Commission (CWGC) is a highly significant organisation whose duty is to commemorate Commonwealth war dead from both World Wars, a responsibility that has progressively led to the maintenance of physical fabric as well as preservation of the intangible aspects of commemoration. Working collaboratively with the CWGC, this work is based on Conservation Management Plans (CMPs) for three important sites around the world: Menin Gate Memorial (Belgium), Jerusalem War Cemetery (Israel) and Tauckyan War Cemetery (Myanmar). These sites are important places of remembrance and commemoration that contain a unique set of local, regional and international cultural values. As such they form part of the wider heritage of commemorative sites worldwide and bear witness to the sacrifices made by Commonwealth forces throughout the conflicts of the 20th Century. The primary and secondary research conducted in

collaboration with the CWGC (in particular an in-depth assessment of their own archives) has revealed previously unknown architectural aspects of these sites, for example the significance of Jerusalem War Cemetery in the urban development of Jerusalem, the importance that Menin Gate has within the history of battlefield pilgrimage and the notable application of modernist and classical design principles by relatively unknown architect H J Brown at Tauckyan War Cemetery. This has increased understanding of their significance and highlighted the potential for further awareness of these sites and their designers within the historical development and heritage significance of British, Commonwealth and International architecture. Furthermore, a complete understanding of the history and significance of these sites have provided a sound framework for future management of the sites, thus prolonging their life and helping raise awareness of the great sacrifices of the Commonwealth.

Architecture Pending

Thomas Parsons, Royal College of Art, UK



© Thomas
Parsons

This research examines the state of the architectural profession as described through past and contemporary media, thereby gaining an understanding of its need for ethics. I analyse Jeremy Till's award winning books and his sources and compare this to the guidance given by professional bodies. I then apply these ethical strategies to Jeremy

Till's own house to see if it stands up to his own criteria. Ethical considerations are important for any individual involved in decisions that are going to affect others but 'Architecture Pending' is most concerned with the difficult decisions made in the process of designing buildings.

Memory, Exhibition and Character at Dulwich Picture Gallery

Alison Fisher, Courtauld Institute of Art, UK

Dulwich Picture Gallery is an intriguing building and the architect, Sir John Soane (1753-1837), was well known and respected amongst the architectural profession, and remains so today. This essay examines the inception, variant schemes, detail design and construction of this innovative building, to establish the level of the architect's achievement and gain an understanding of the building's cultural provenance. Extant drawings at both Sir John Soane's Museum and the Victoria and Albert Museum, the recorded minutes of the 'Private Sittings' of the Dulwich College Master, Warden and Fellows, as well as Dulwich Picture Gallery as it stands today, have been investigated to this end. The structure of this essay attempts to follow Soane's design process for Dulwich Picture Gallery, or his method of structuring the project. For this reason it is approximately chronological but incorporates cross references to previous events. Examined first is the mausoleum at Dulwich Picture Gallery and its

predecessor at Charlotte Street, which Soane designed in 1807, and the new spiritual and commemorative role for the mausoleum. Secondly the composition of the picture gallery interior is considered, its likely precedents described, the relationship with the mausoleum interior analysed and, more generally, its wider influence on gallery design indicated. Finally the exterior of Dulwich Picture Gallery is discussed, with reference to elevation drawings, the topography of the site and the contemporary interest in architectural 'character'. Much has been written about Sir John Soane and his architectural career, often interweaved with narration of his difficult personal life, however this study chooses to focus on his professional life and architecture. Dulwich Picture Gallery was one of Soane's favourite projects and, as the building still exists, it is possible to study the architect operating at the height of his creative and technical abilities.



Dulwich Picture
Gallery
© Alison Fisher

Louise House Forest Hill Heritage Study

Anna Sullivan, HTA Design LLP, UK



Louise House
© Anna Sullivan
for HTA Design LLP

The new owner's ambition to improve the setting of a listed former Girls' Industrial Home and create an exhibition space for community engagement in a curtilage building grew to also improve the setting of the neighbouring listed library. The research sought to find out about a similar community spirit behind the original developers of the site, a charity providing a home and a trade for boys and girls. Research for a Heritage Study supporting the planning application for the curtilage works had to have a strong focus as the

final report would be brief, but sought to give a more rounded understanding of the institution's place in the community than the otherwise detailed Statement of Significance the statutory listing provided. This included the Royal patron of the charity and a little on the education debate of the 19th Century. The Heritage Study format and the time available for research kept the scope narrow and demanded it remain relevant to the aims of the project, but this did not mean stopping at finding what the front garden was like.

From the Crystal Palace to an Architecture of Atmospheres: Histories of Anthropological Display and Post-Human Futures in the Unrealised 1960s Pier Luigi Nervi and Powell & Moya Design for the Pitt-Rivers Museum, Oxford

Dr Polly Gould, Bartlett School of Architecture, UCL, UK

This research aims to explore the shift from the notion of the human in the environment to the understanding of the human and environment, as it is manifested in the unrealised 1960s architectural designs by Pier Luigi Nervi and Powell & Moya design for the Pitt-Rivers Museum, Oxford. It does this by examining how the various designs of anthropological display relate to the varying understandings of the human place in the environment and the meaning of ecology. The Nervi and Powell & Moya plan for the Pitt Rivers Museum is taken as an opportunity to look at the display and architectural ideas of the collection's eponymous nineteenth century initiator, General Lane Fox Pitt-Rivers (1827 - 1900), and his practice of typological formalism, and to compare this to the contrasting anthropological ideas and museum display methods of Franz Boas (1858 - 1942) as demonstrated in

the diorama and his ideas of contextualization in the present of the material cultures under consideration. These historical debates in anthropology and display design are understood with the engagement with current new materialist philosophies such as the post-human and geo-centred thoughts of Rosi Braidotti, and the ecological thinking of the epistemologist, Lorraine Code. These comparative and interpretive methods allow for a further analysis of the overlooked aspects of these methods of anthropological display, and of the Nervi design, in order to interpret a new ecological ethos, which I characterize as an architecture of atmospheres. The research finds that, with a change in these epistemologies, from one derived from glass to one founded on ice, comes a further necessary change to produce an ecological design practice ethos suited to a climate change sensitive post-human world.



Lantern slide of
Crystal Palace
© Polly Gould

Saarinen's Last Airport: Playing the Greek Card

Dr Costandis Kizis, Architectural Association School of Architecture, UK

This is the story of a fairly unknown building by a famous architect and of the struggle to argue about the national character of an international airport. "Saarinen's Last Airport: Playing the Greek Card", focuses on the issue of Greekness in the negotiation of the Greek state with Eero Saarinen, for his project of the airport terminal of Athens. A major controversy characterised the negotiation: the call for an international architect to build a signature building on the one hand, and the specific demand for a "classical flavour" on the other. Both the state and the architect constructed a superficial narrative that would force a link of a modern icon with an argument on national character. The negotiation, the official comments, the press and lastly the scandalous omission of the building in historiography, render the case symptomatic of the role of national stereotypes in state policies and the formation of public opinion. It demonstrates clearly an established

xenophobic attitude based on the conviction that Greece owes nothing to foreign culture. The paper draws from a longer research project, which examines the architectural debate on modernity and national identity in post-war Greece by discussing four cases of "modern Greek myths" that have tried to reconcile national stereotypes with modern ideas and reflect the problematic process of absorbing modernity. This work contributes to the dissolution of myths and constructs in architectural historiography and responds to recent international scholarship on national identities and modernity. This problematic is increasingly important today; not only because of the political challenges that nationhood faces but also because architectural practice is called once more to respond to different cultural milieus, that are hard to define in the blurred zones of emergent localities, which are not anymore defined by the binary paradigm of the national and the international.



Athens
International
Terminal
Hellenikon Airport
by Eero Saarinen
© Costandis Kizis

Silence and Music in Architecture

Joe Walker, University of Bournemouth, UK



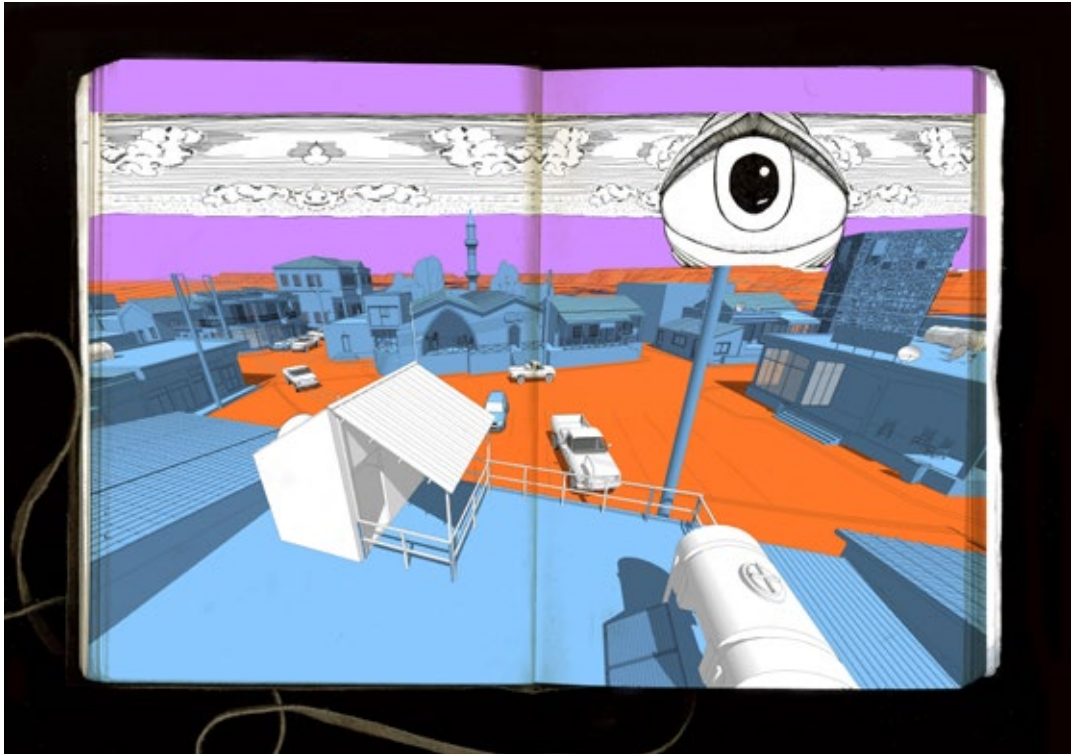
Silence
© Joe Walker

'Silence and Music in Architecture' investigates beyond the established fundamental concepts that give architecture and music their analogies, the piece delves into the logical and physical essence of these connections by working within the ulterior elements between the two disciplines. The research is born out of a culture of exploration and making, in parallel with the interrogation and ultimately coalescence of theory. The process began with collaborative sound experiments in an architecturally led workshop. It involved a series of sound experiments alongside artists and architects from different disciplines within distinctive urban environments. With basic principles

developed and tested within a gallery environment, it was from this stage that theory became an intrinsic influence. The written work, citing individuals such as John Cage and Ludwig Wittgenstein, became the supportive document to the creation of a new instrument and the concept design of a public building for music. The research has the aspiration to instigate a new wave of progressive thinking in to the archi-musical relationship. The piece supports the idea that a new methodology could freely manifest itself in a project devoid of music but benefit from compositional theories, evidenced through recordings, music, an instrument and architectural concepts.

Game of Being: State Intervention in Sanctioned Surveillance Village, Pyla

Cagri Sanliturk, University of Sheffield, UK



© Cagri Sanliturk

Now... time is to penetrate into the in-betweenness of fantasy and reality. You will believe what you want to believe, I free you. No one can control perception. It's a losing game, so I don't play. I allow you to lose. Lose yourself in your own fantasies of what you want to be; You want to be oppressed, free, red, blue (nationality-symbol), As it may be, you are all of these, Perhaps you are none. What you are is for you to find out. Imagine a village; hybrid community (Turkish and Greek Cypriots), different languages, segregated public places, schools, markets, UN inspection towers, different power mechanisms, present even in their absence, striated spaces, conflict in disguise and normality of living with 'the others', yet it is not only these; smooth space, contesting the regulated space of order, is incarnated in cultural rhetoric art; provoking catharsis, a release of emotional tension after experienced repression and anxiety about

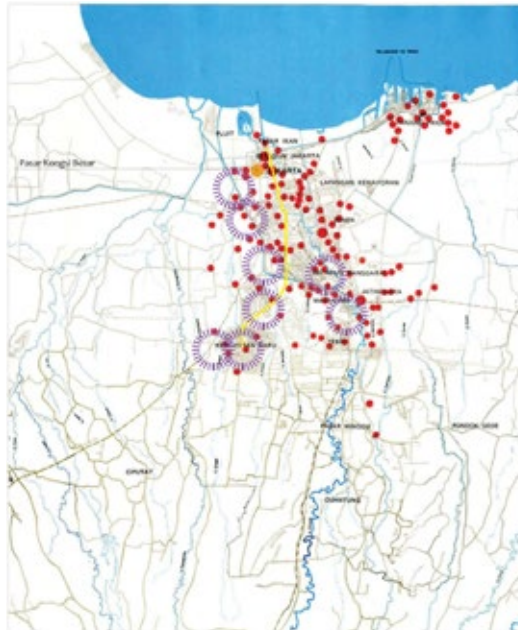
the future. Yes, all embodied in the Cyprus context. Power relations and the everyday normality of living in conflict will be questioned through, and understanding gained from village inhabitants will be used as methodological devices. These will help implement an art-based intervention in the bufferzone, under the ongoing idea of 'Game of being State'. It aims to analyse, test power and create alternative ways of re-evaluating mundane and living with the others in Pyla. The game rehearsals, working in collaboration with UNPOL – the leading authority – on organizing the Bi-communal Pyla Festival, are, thus, some of the key investigation tools that I used to read and re-write the social and political relations and realities. Why does it suppose to be actual truth, standards and coded situations that manipulate thoughts and actions? Let's experience and play "what is good?" in the 'Game of being State'.

The Practice of 'Marketplace Coordination' in Jakarta (1977-1998)

Dr Pawda Tjoa, University of Cambridge, UK

This paper reflects on the urban policies and planning practices in Jakarta, particularly in relation to the organisation of the inner-city marketplaces in the aftermath of Indonesia's struggle for independence from the Dutch. This study explores the spatial politics of contested urban space through the lens of 'marketplace coordination' in Jakarta by highlighting the root of social tension and the escalation of internal conflict between 1977 and 1998. It traces the effects of Jakarta's urban processes on the daily operations of public spaces such as the marketplaces, often resulting in their renovation, expansion and relocation. The nature of this study necessitates the unpacking of numerous traditional categories that were used to differentiate groups of merchants and within the wider society. The ideology of 'development' was used as a tool to create order and harmony but in reality it was a

powerful catalyst for contradiction, which contributed to the persistent fragmentation within existing communities—even despite the efforts of those in power to homogenise the city. This study reveals the ways in which urban policies, which were directed at creating order and progress, triggered the internal permutations of categories within the merchant communities. The seemingly inconsequential conflicts within the market stalls culminated in social tensions that erupted during the Asian financial crisis in 1997-1998. By examining the complex socio-spatial relationships within the marketplaces, this study also contributes to the long historic discourse on the interpretation of identity in the urban space of the city, and the meaning of public space in previously colonised cities.



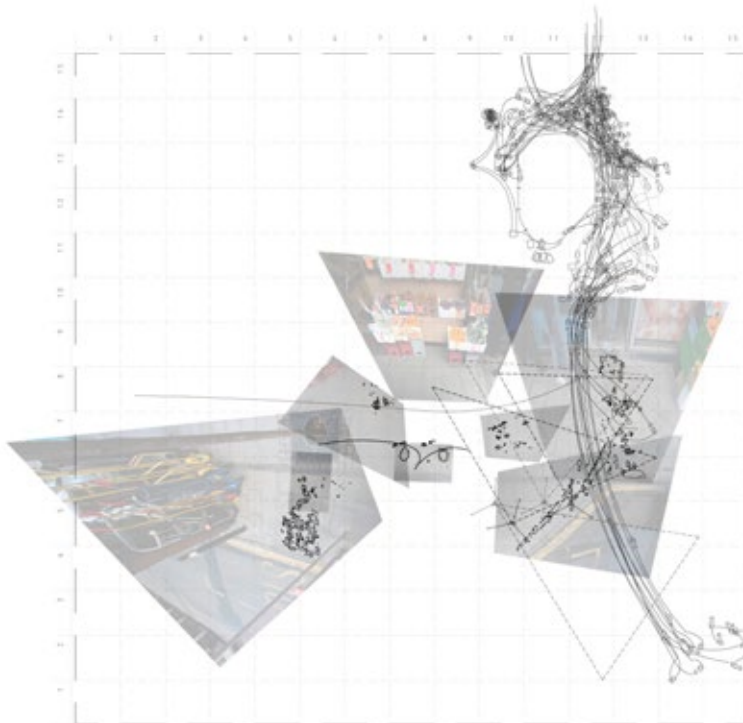
Masterplan of
Jakarta 1965-1985
© Pawda Tjoa
adapted from
Pemerintah DKI
Jakarta

Weaving the Line: On the Integrity of Marks

Dr Sophia Banou, Edinburgh School of Architecture & Landscape Architecture,
The University of Edinburgh, UK

This research questions the temporal and material limits of architectural representation in relation to the fixity of architectural convention. In this context, the paper performs a close study of the line as the exemplary architectural signifier, and a 'guarantor' of spatial integrity for architecture's own object. The question of architectural representation, its limits and possibilities, are revisited in this paper through a discussion of Catherine Ingraham's theorizing of architecture's mode of operation, as a concealed constitutive act of movement, in relation to historical notions of architectural origin and "dignity" (Vitruvius). The question 'linearity', as definitive not only of the scope of representation but also of architecture's own authority upon the conventionally 'unrepresentable', is in parallel investigated through the drawing experiment 'Weaving Lines/Looming Narratives': the survey and documentation of a small urban site. Questioning the role of geometry and language as the 'cornerstones' of architectural drawing and thinking, the research engages with drawing as performative

practice rather than systematic language, and as a field of action rather than a representational order. Similarly, 'Weaving Lines' challenges the solid-void dualisms reflecting normative notions of presence and architectural space. Drawing from extra-architectural modes of notation, and the explorations of modernist visual arts, this projects challenges the phenomenal 'stasis' of normative architectural representations, through a reconsideration of the acts of recording and narration that occur within the process of architectural design. Architectural drawing and space, both are thus considered as continuous, kinetic and textual conditions, within which operations of description and narrative become interchangeable, and the dual register of architectural drawing, emerges as an opportunity for invention, rather than a liability. The constitutive mutability of architecture as an always already representational operation, reveals the potential of an expansion of architecture's range of concerns through not the substitution, but the 'motivation' of its codes of representation.



Fishmonger,
Camera and Water
Waste, Partial Plan
© Sophia Banou

Critical Paths: Identity, Disposition, and Architectural Agency

Dr Saul Golden, Ulster University, UK

Relative to increasingly contested, compromised, and privatised aspects of the architecture profession, this research focuses on debates and processes outside the mainstream of building-centred practice. It investigates selected accounts by architects, of their practice trajectory, to present a visual understanding of architects' evolving professional identities and practice roles. It develops a unique method, by which architecture and agency can be characterised and evaluated as reciprocal outcomes of more critical and transformative practice. The methodology combines sociological and architectural theories. It adapts concepts from key treatise including Bourdieu's agent-field analysis and Unger's philosophy of transformative vocation, interpreted with Till's proposals for critical spatial practice in architecture, and Pérez-Gómez's concepts of architectural praxis as conscious applications of architects' knowledge and ethics to practice. It analyses and locates architects career accounts as new practice frameworks within the background of shifting traditional architectural norms and the broad field of contemporary practice.

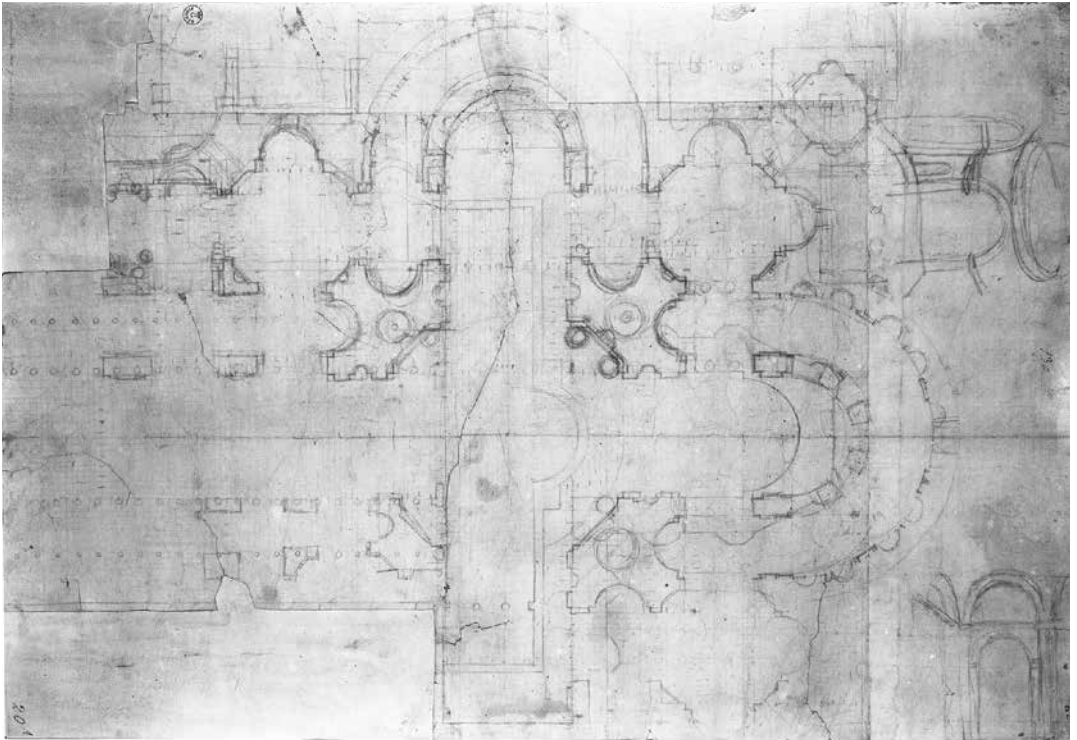
In-depth interviews with selected architects collect narratives about architects' knowledge and skill, examining them for lessons about how creative knowledge can include critical and transformative motives while satisfying more instrumental issues of survival, esteem, and influence. The analysis focuses on professional-identity claims and diverse practice approaches over project outcomes to reveal thresholds of architectural knowledge, key moments of action, personal values, and developing professional identity. The broader context of how the professional field of architecture and its governing bodies, including the RIBA, debate practice futures is also set out and discussed. The conclusions reflect how different critical practice trajectories share a combination of personal intention and motivations that are conceptualised as a form of professional habitus and compared with established professional norms. Findings question existing understandings of participation and place, and argue for architects to direct their creative professional knowledge to engage more effectively in changing professional and social contexts.



Architectural career/
identity diagram,
comparing explicit
- implicit influences
relative to personal/
professional factors
© Saul Golden

Rhetorics of the Plan

Alejandra Celedon, The Architectural Association School of Architecture, UK



Donato
Bramante's
design for
St Peter's
Florence 1506
© Uffizi Gallery

'It is the plan that reconciles all the requirements of the programme; it is the plan that contains the architect's creative thinking'. This ode to the plan appeared written in a late 19th century Dictionary of Art and similar statements could be found across architectural texts of the time. However, the plan did not always have the authority that held back then, a power challenged by arguments developed in the second half of the twentieth century. An enquiry into such authority is the main concern of this research, and into the consequences the above had for architecture. Why did the plan dominate architectural discourse and practice for about two centuries and in which ways this affected the discipline? The prominence that the plan gradually gained along the eighteenth and nineteenth

centuries had not always been so, what poses the main historical questions of this work: how and why did the plan acquire such place, how it became the central architectural device and came to matter as much as to be at the core of the discourse of modern architecture and eventually to be one of the central targets of its critique in the decades after Second World War. Furthermore, through interrogating this system of representation there is an attempt to reveal the modes in which the plan became register or agent of a particular sensibility towards the city. The research unpacks the ways in which the drawing of the plan, in its different uses, indicates the transformations of the relationship between architecture and the city, locating the urban as an expanded field of the discipline.

