From the editor ...

Welcome to the fourth newsletter ending another year of Architectural Science Review. We have featured the Special Edition Architecture Planning Interface, guest editor Dr David Wadley. The papers featured in this edition are as follows:

‘What do the Professions “Profess”?’ Comparing Architecture and Planning Codes of Ethics, contact author Bonnie Johnson

‘Language as design tool: An empirical and design perspective in the field of architecture and planning,’ contact author Doris Gstach

‘Brain Responses to Architecture and Planning: A Preliminary Neuro-Assessment of the Pedestrian Experience in Boston, Massachusetts,’ contact author Justin Hollander

‘Design Intervention in Architecture and Planning: Practical Explorations and Applied Outcomes,’ contact author Hunter Gore

‘Using Design Technology to Explore the Implications of the New York City Zoning Amendment for Quality and Affordability,’ contact author Jesse Keenan.

I would like to thank the authors who submitted papers; the referees who made it possible and sincere thanks to Dr David Wadley for bringing it together.

There are a number of issues currently on the agenda for 2016.

In conjunction with Taylor Francis we have been monitoring the ranking of ASR compared to other journals. It currently sits in Thomson Reuters Arts & Humanities Citation Index and we have been investigating the possibility of moving it into the Science Citation Index. The modeling of rankings by T and F indicate ASR sits in a comparable position with other Building Science Journals regarding citation and other indicators of academic excellence. In 2017 we will continue to monitor the academic performance of ASR. Helpful in this process are review papers. If there are authors interested in this type of paper please let me know.

2017 is the 60th anniversary of Architectural Science Review. A virtual edition of is planned with notable papers over its sixty-year history. This will enable a reflection how the focus of ASR has changed, the new themes and issues that have evolved. The late Professor Henry Cowan who established the journal aimed to encourage ASR to be a place where the diverse areas of architectural science could be brought together. From the papers that have been collected over the years this is truly the case. So we will have examples of the most cited papers, the most read papers and others nominated from the readership.

Two Special Editions are planned. The inaugural Special Edition from Passive Low Energy Association Conference, Guest Editor Pablo La Roche and the Windsor Conference on Thermal Comfort, Guest Editor Professor Sue Roaf.

The Journal now publishes 6 editions a year of which two are Special Editions from conferences or those posed by prospective editorial teams. This type of edition makes a significant input to the Journal with contributions from organisations such as the Architectural Science Association (ANZASA).

Book reviews are now included in the newsletter; if readers would like to propose and review a book we can facilitate this process.

I would like to take this opportunity to thank all those who have been involved with ASR this year; the Editorial Board, the Associate Editors and referees. My sincere thanks to Dr Peter Smith and Sue Macleod who provide unfailing support to the Journal over the years.

Merry Christmas and a Happy New Year.

Redefining urban design

New challenges in ethical codes of practice

We examine two professions over time, architecture and planning, to understand what they “profess”. As “professions” each one presents itself as the solution to clients’ problems competing for work and demarcating each one’s “territory”. We compared the professions by analyzing the values expressed in the codes of ethics from the two major professional organizations in the United States, the American Institute of Architects and the American Institute of Certified Planners. From 1940 to today, we found the professions responding to major historical events and social movements increasing their attention to human rights, the environment, and cultural heritage.

The major differences were in architecture’s steadfast commitment to the physical environment and planning’s greater focus on process over product. As planners seek to reclaim “design”, they may be headed for more collaboration or clashes with architecture. However, both architecture and planning have an emerging profession, urban design, with which to contend.

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David Wadley lectures in property development, regional planning and economic geography at The University of Queensland in Brisbane, Australia. He has consulted widely to the private and public sectors, to the level of the OECD in Paris. Apart from ongoing practical enquiries about infrastructure placement and social welfare, his primary research foci now lie in environmental management and futurology, particularly related to rationality and irrationality as applied to modelling and decision-making processes.

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Books

Urban Sustainability in Theory and Practice

Author: Paul James

Urban sustainability as a concept is a difficult proposition to support since the complexity of the urban scale of development appears to defy management and control. At best a framework can be provided and one can report the environments impacts of cities. This book proves a framework for examining the sustainability of cities through defining sustainability as comprising four main dimensions, called Circles of Sustainability CS, which are ecocological, political, economic and cultural factors. This replaces the more conventional Triple Bottom Line (TBL) approach, which comprises environmental, social and economic dimensions. Jones argues that the circles of sustainability provide a more holistic approach to urban sustainability and understanding of urban life in cities. In reality, the research and planning space can benefit from both modeling methods. The TBL approach, which Jones suggests is about measuring externalities to the current input/output models of sustainable cities, has difficulties in with fining appropriate indicators for areas such as the social dimensions. The CS approach has a number of indicators, which can be used in this regard.

The book is structured sensibly in three parts; the first provides a background to the CS approach, the second provides a more depth to the CS approach. It discusses CS as what Jones calls the ‘Circles of Life’ which are patterns of social activity, which societies can embrace to more towards a more sustainable future. The third part of the book provides the research methods and tools for an organisation to adopt this CS approach.

Interesting features of the book are the case studies of a number of cities using the method. Each case study has an urban profile, which documents assessment of how the city addresses the indicators used in CS approach. There is also a description of the data to create the profile, which helps to understand the assessment provided. The output allows one to compare cities. Some are from developing nations and some from developed nations. There are no real surprises here from the data, however the messages for sustainability if clear from the case studies.

Mega cities such as Delhi struggle with resources needed to house and increasing population however it has a lower carbon footprint than Melbourne due to its car dependency, waste and emissions. However, from the cultural perspective Melbourne is highly rated. The CS in this way it is possible to identify strategies to reduce the unsustainable practices and implement improvements to cities. The systems could be improved if more quantitative data is provided to assist with the measurements of the indicators. Base lines are important so it seems that this tool could use data from other tools to assist with the assessment.

BOOK OFFER
Choose a book you would like to review for the ASR Newsletter
we can arrange books to be sent to you

Conference index

ADELAIDE
The 50th Architectural Science Association Conference 2016
Adelaide
Fifty years later: Revisiting the role of architectural science in design and practice
Adelaide, 7-9 December 2016
www.architecture.adelaide.edu.au

EDINBURGH, Scotland
PLEA 3rd-5th July 2017
Passive Low Energy Architecture Design to Thrive
Registration now open at: plea2017.net

ATTENTION PHD STUDENTS
Abstracts welcome to be published in ASR newsletter

Exploring a biomimicry approach to enhance ecological sustainability in architecture

Author: Aroscha Gamage (right)

ABSTRACT
Increased environmental consciousness in recent years, stimulated by concerns about human induced climate change, has motivated a desire to reduce the impact of the built environment through eco efficient design imperatives. This evolution has provided eco practitioners with multifaceted challenges in making their practices more ecologically sustainable through optimal approaches to design.

One such design approach to ecological sustainability is to emulate or take creative inspiration from natural systems, often referred to as biomimicry. This study examines how eco practitioners perceive biomimicry as a design approach in architectural eco design practice. An exploratory approach, taking a post-positivist epistemological framework informed a mixed method, correlational, project-based research design. The theoretical contribution was a model and framework for biomimicry thinking which suggested ways of addressing problems of conceptualisation and understanding the complexities of ecological integration that had been identified as barriers to the practice of ecologically sustainable design. The empirical contribution was a recommendation for a Biomimicry Approach, which proposed a simultaneous use of indirectly mimicking and directly mimicking to architectural eco design projects. Multivariate statistical analysis recognised biomimicry principles, design propositions and physical attributes as the most significant predictors that can enhance ecological sustainability in architecture. The study’s outcome in relation to biomimicry advanced understanding of ways to reduce waste by efficient spatial design was seen as a contribution architects can make to the concept of a reduction scenario for the ecological age. This thesis adds important knowledge to underpin future research and recommends biomimicry design indicators, biomimicry design matrix and possibilities for the use of vernacular architectural strategies for the development of architectural eco design practice.