What numbers can tell us?

We employ analytical theories of space syntax, specifically visibility graph analysis (VGA) used for building scale spatial analysis within this research. In simple terms, VGA plans colour grade interior space in accordance with their integration values which indicate social importance of any space in relation to all the other spaces. In a sense, the space itself is described with a series of numbers, in any VGA plan there are integrated spaces and segregated spaces but majority of spaces are usually in-between; neither integrated, nor segregated.

We argue that it is possible to differentiate socio-economic significance between those ‘in-between’ spaces within spatial configurations where their functionality is dependent on socio-economic activity; we proposed to achieve this by analysing the values we get from VGA with a finance tool that is used to determine ideal value levels of a stock, based on Fibonacci mathematical sequence. In accordance with these limitations, we chose an existing restaurant - a space defined by its socio-economic activity—and analysed its VGA values using Fibonacci tool; matching the values we got from the tool pointed out several locations on the VGA plan which were seemingly unimportant spaces but the financial data acquired from the restaurant pointed out that those spaces were occupied by the most active tables within the restaurant, only following those located directly at the centres of integration. What is basically argued here is the possibility of identifying seemingly random patterns of social activity within architectural space; predicting possible movement behaviour. Obviously, we need more cases and different scenarios of functionality before we can say for a fact that it is possible to make predictions on socio-spatial behaviour but the indication is that there exists unexplored ways of understanding how we navigate through architectural space, embedded within the interpretation of spatial systems as formations of numerical nature.

From the editor...

Welcome to the Newsletter for the first quarter of 2017. I was invited to the 50th Anniversary of the Architectural Science Association Conference in Adelaide University. Many thanks to Marc and Veronica, the ASA committee and the university for their hard work in making a successful conference. We are hoping they will put together a Special Edition of papers to be published in 2018. This year we present the 60th volume of ASR. A Virtual Edition of ASR is planned for April which will include access to the most cited, most read, most downloaded papers in ASR over the last ten years. An Editorial will be provided to identify the contributions made from these papers.

The first Edition of this year, 60.1, called ‘Refocusing Architectural Science’ features the following papers:

1. Susie R. Wu, Martin Greaves, Jiquan Chen, and Sue C. Grady, ‘Green buildings need green occupants: a research framework through the lens of the Theory of Planned Behaviour’
2. Carmen Alonso, Pablo La Roche and Ignacio Oteiza, ‘Occupants and energy performance: the Schrage House,’
3. Isis E. Bennet and William O’ Briene ‘Field study of thermal comfort and occupant satisfaction in Canadian condominiums’
4. Bin Su, ‘Field study to compare and evaluate winter indoor thermal and health conditions of school buildings with different envelopes’
5. Sally S. Shahzad, John Brennan, Dimitris Theodossopoulos, Ben Hughes and John Kaiser Calautit, ‘A study of the impact of

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Books

Urban Design Thinking
A Conceptual tool Kit
Author: Kim Dovey, 2016
Bloomsbury Publication

Urban Design Thinking is a rich tapestry of conceptual ideas for urban designers. The structure of the book starts with an introduction into the philosophical basis for the book and then explains a number of threads that underpin the book. These represent dimensions to urban design thinking and is common issues posed by designers. The first theme is DMA the current dilemma of urban density which comprises Density, Mix and Access. Dovey is critical of what he calls the low density, mono-functional cul-de-sac which he claims is an anti urban form. The extent to which the level of DMA produces good quality of life for occupants is a subjective of research. This brings us to the second dimension of urban design thinking that of the interconnectedness of indeed polarization between the subjective and the objective. There are aspects of DMA, which are objective and subjective which are measurable hence making urban design thinking both art and science. The third dimension of urban design thinking is the way aspects of the city are brought together in his terms assembled. He basis this on the work of Christopher Alexander in his book Pattern Language, which represents architecture as patterns of physical, economic, social, cultural and environmental aspects. How these combine effectively determines the functionality and quality of cities. A fourth theme Dovey explains is the way we represent the city to communicate to others and provide understanding. He argues that one of the key aspects of is how the city is represented as a diagram, which shows its functionality. The book has many interesting diagrams of equal travel times such as isochrones of access modes to urban centers in Melbourne.

The final dimension is change, hence the importance of the morphology of cities. Dovey asks an important question about what point do cities fail to adapt become paralyzed or change out of control? The book examines this question through examine each key concept of urban design in turn with examples to explain each concept. The book provides an important toolkit for papers found ASR in recent years as makes a useful contribution to the understanding of this research.

Conference index

ASA ANZAScA Conference
The 51st Architectural Science Association Conference 2017 Wellington New Zealand Early December 2017
The 2017 Conference will be held at the Victoria University of Wellington, New Zealand in early December 2017 (final dates later)

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individual thermal control on user comfort in the workplace: Norwegian cellular vs. British open plan offices.'

6. Annemarie S. Dosen and Michael J. Ostwald: ‘Lived space and geometric space: comparing people’s perceptions of spatial enclosure and exposure with metric room properties and isovist measures.’

7. Mustafa Aknar and Resmiye A. Atun, ‘Predicting movement in architectural space’ It looks at methodologies that are commonly used to study questions such as the thermal comfort of occupants and the collation of methodologies from planning and social sciences.

I would like to welcome new Associated Editors to ASR from the PLEA, Passive Low Energy Association.

Professor Pablo La Roche; he is Professor of Architecture at Cal Poly, California and also Sustainable Design Leader at Callison RTKL, USA. (https://env.cpp.edu/arc/faculty/pablo-la-roche.)

Dr Paula Cadima; she is President of PLEA and created and directed the master’s course on Bioclimatic Architecture and taught at the Architectural Association, UK, Faculty of Architecture’s diploma courses (http://sed.aaschool.ac.uk/staff/teaching-staff/paula-cadima/)

Professor Marc E Schiler; from the School of Architecture, University of Southern California, USA (https://arch.usc.edu/faculty/schiler)

From ASA, the Architectural Science Association; Dr Henry Skates; the School of Environment, Griffith University, Australia. (https://www.griffith.edu.au/environment-planning-architecture/griffith-school-environment/staff/henry-skates)

Griffith University and Associate Professor Robert Crawford, Melbourne School of Design (https://msd.unimelb.edu.au/people/robert-crawford).

Congratulations to Dr David Wadley, School of Earth and Environmental Sciences, The University of Queensland, Australia (https://sees.uq.edu.au/profile/546/david-wadley) for his appointment to the Editorial Board.

Management of the journal is taking a change at present with strategies to improve the turnaround time for review of papers and trying to ease through the bottlenecks in our systems such as the initial review of papers and appointment of referees.

We look forward to an exciting year for 2017 and wish all the best.

ATTENTION PHD STUDENTS
Abstracts welcome to be published in ASR newsletter

ASA (ANZAScA) is a not for profit organisation registered under the Associations Incorporation Act 2009, NSW, Australia

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