

BOOK REVIEW: URBAN EXPERIENCE AND DESIGN: CONTEMPORARY PERSPECTIVES ON IMPROVING THE PUBLIC REALM, EDITED BY Justin B. Hollander and Ann Sussman

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Abstract. Emerging from the First International Conference on Urban Experience and Design (Ux+Design) held at Tufts University in 2019 this collection of papers approaches design from the point of view of neuroscience and the evaluation of human responses by means of biometric monitoring. A common thread is the requirement for emotional connection with our surroundings in order to feel at ease. This connection is accomplished by means of biophilia, fractal patterns, face-like facades and the presence of other people.

Keywords: architectural literacy, biophilic, biometric, cognitive maps, ecoempathic, embodied cognition, emotional nourishment, eye-tracking, fractals, neuro-architecture, paredolia.

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The human love affair with technology has alienated our species from the evolutionary foundation of our nature. Our instinctual need for connection and emotional nourishment has been subsumed by commercial interests and belief systems based on exploitation and willful denial. The consequences of this development include vast wealth and resource inequity, political and social fragmentation, and degradation of the human and man-made environment.

At the beginning of the 20th Century a new science of psychoanalysis began, albeit haltingly, to explore the phenomenon of trauma and its impact on individuals, families and society. By the end of the century the extent of traumatization as an institutionalized dynamic began to become apparent, including its multigenerational implications. Now, at the beginning of the 21st Century, neuroscience, increased understanding of the mind/body connection, and especially somatic processing, and a fuller acknowledgment of the consequences of racism, sexism, ageism, and militarism are approaching critical mass, with potentially enormous consequences.

The outcome of an increased awareness of how we mistreat the environment, each other, and ourselves will hopefully result in a more equitable and sustainable world. But first we must overcome the defenses that we have constructed that allow us to behave in such a destructive manner. While this is happening one client at a time in consulting rooms and ZOOM meetings around the globe, it is also beginning to happen in our approach to the environment and our understanding of our place in it.

As it happens, we understand very little about how human beings interact emotionally and physiologically with the world around us. This is beginning to change. The collection of essays in this recent book on *Urban Experience and Design* describes various studies

ranging from biometric monitoring to way-finding surveys, providing unique insight into our cognitive processing of environmental stimuli. There are evolutionary priorities hard wired in our central nervous system that prioritize facial recognition and evaluation of risk or safety. We have no control over these hard-wired activities that inform our endocrine system and vagus nerve, the core biology of our embodied cognition. Yet the experience of stress with all of its consequences for behavior and health is largely the result of this autonomic response.

Urban Experience and Design is divided into three sections. In the first a review of prior theory explores findings that support a biological understanding of the impact of architecture and planning. Robert Tullis explores how various investigators understand the concept of “sense of place”, identifying common elements and exploring the human reliance on visual data for social behavior. Nir Buras expounds on the basis for classical vocabulary in neurological processing. Donald Ruggles explains how emotional bonding in infancy is based on the same evolutionary priorities as our response to beauty. Nikos Salingaros draws on Christopher Alexander, biophilia, and fractal patterns of organized complexity to demonstrate how the built environment can reinforce a sense of wellbeing.

The second section describes how the human experience of place can be measured and evaluated. The editors with the assistance of graduate students report on eyetracking of biophilic areas in a recent residential development using Visual Attention Software (VAS). Two researchers from the University of Amsterdam, Frank Suurenbroek and Gideon Spanjar, describe their eye-tracking research in dense urban settings. Saeid Khaghani, Jamal Esmaeilzadeh Vafaei and Seyed Behnamedin Jameie discuss their evaluation of “Attention and Focus in the Perception of Persian Architecture”.

The third and final section is unified by the assertion that the theory and research of the previous sections present us with a “New Paradigm for Urban Experience and Design”. Articles include discussions of the potential future of cognitive mapping (Andrew Mondschein), the use of eye-tracking in street safety (Kevin J. Krizek, Ben Otten and Federico Rupi), Ecoempathic Design (Misha Semenov), “Exploring Urban Form through OpenStreetMap Data” (Geoff Boeing), Device-Free Mapping (Kristen Jens), “Designing Intimate-Scaled Spaces on Urban Campuses” (Vena DeLauer), and a Conclusion by the Editors.

Taken together these contributions could indeed inform a new paradigm for the design professions. Evidence-based design is intended to avoid arbitrary decisions, respecting instead actual and measurable outcomes. With a more comprehensive understanding of human functioning and cognitive biases designers are in a better position to create salubrious environments. When our health and wellbeing are understood to be largely environmentally determined the methods described in this volume are likely to become a priority. One can even imagine the adoption of performance-based standards based on biometric evaluation as a mandatory dimension of the permitting process.

Perhaps the most compelling dimension of this research has yet to be explored fully. In the Conclusion Sussman presents her thesis that the founders of Modernism suffered from traumatic stress (Gropius and van der Rohe) and Autism Spectrum Disorder (Le Corbusier). The World Wars left a trail of trauma, coinciding with feverish industrialization and resource exploitation. In retrospect modern culture appears to be the consequence of this traumatization, with dissociation and personality disorders informing a culture of narcissism and depersonalization. How could the professions of architecture

and planning embrace the idea that buildings should be machines for living in cities of disconnected high-rises? How could we have become so disconnected from the essence of architectural beauty that we would willingly strip our buildings of ornament and ignore the basic rules of proportion and symmetry?

Just as the treatment of trauma now recognizes the role of our somatic processing and regulation of our central nervous system as the source of health and wellbeing, so too can the design professions re-member our disassociated parts by reclaiming our biological and aesthetic heredity. It is an act of healing that our world and our hearts are crying out for.

Reference

Hollander, J.B., Sussman, A., Editors (2021) *Urban Experience and Design: Contemporary Perspectives on Improving the Public Realm*, Routledge, New York, USA.