

[Architecture Without Vision] challenging the societal dependence upon vision in perception

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I. EXTENDED ABSTRACT

Our dependence on vision is crippling our other senses. Are the blind handicapped because they cannot see? Or are we, the sighted, handicapped because our dependency on vision inhibits us from using our other senses in perception? Experiencing architecture is not merely a sighted activity. We inhabit a space with our whole being. As Juhani Pallasmaa states, "The impact of architecture on the human experience is too deeply existentially rooted to be approached solely as an element of visual design."

Imagine a life where you would need to interpret your surroundings without the thing you depended on most – vision. What is architecture in a world without vision? How can someone move throughout space without seeing it? How might we perceive space if we ignore our dominant visual sense to focus on the other often ignored senses?

We began to address these questions through a literature search, analysis of buildings designed for the visually impaired, and interviews with blind individuals and those who work with the blind. This initial research informed the development of a set of principles for multi-sensorial design of built environments. Space. Edge. Path. Transition. Threshold. Landmark. These design principles are intended to enable people, no matter sighted or blind, to navigate spaces using multi-sensory perception. We tested the viability of these principles through application to the design of a proposed building, a "Creative Co-Lab," in which blind and sighted users would come together on the Baltimore waterfront to create collaboratively and learn about perception without vision.

Further development of this work requires collaboration between neuroscientists and architects. Validation of the design principles could be possible through testing user responses to the various types of architectural interventions. What aspects of brain function are involved in navigating architectural spaces and how does the brain respond to the variety of sensory input involved in the navigation process? What changes when visual stimuli are either augmented or replaced by other sensory inputs? Collaboration between architects and neuroscientists is required to address these questions.

2. REFERENCES

¹ Pallasmaa, Juhani. (The Embodied Image: Imagination and Imagery in Architecture, John Wiley & Sons LTD. West Sussex, United Kingdom. 2011. Print. Page 124

3. AUTHOR BIO

Betsy Nolen, Associate AIA (speaker)

Betsy Nolen is an Architectural Designer at Beyer Blinder Belle Architects & Planners. She graduated from the University of Maryland with a Masters of Architecture in May 2015, preceded by a Bachelor of Science in Architecture degree completed in May 2013. Her Master's Degree thesis research focused on a way to design architecture that reinforced use of all the senses. This research crossed into varying categories – phenomenology, perception, cognition, and architectural strategies in materials and acoustics.

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Madlen Simon is an Associate Professor at the University of Maryland's School of Architecture, Planning, and Preservation and a registered architect. Professor Simon's scholarship, research, and creative practice are in the area of design – design thinking, design process, design education, design of buildings, and the application of design to issues in the area of environment and behavior. Professor Simon supervises graduate student research in this area. One design research track investigates design for disabilities, including visual impairments and autism, which involve differences in sensory perception of the built environment.