



# THE ETHICAL IMPERATIVE

106TH ANNUAL MEETING 106TH ANNUAL MEETING 106TH ANNUAL MEETING  
DENVER, COLORADO

## CO-CHAIRS

AMIR AMERI

REBECCA O'NEAL DAGG

ABSTRACT BOOK **ABSTRACT BOOK** ABSTRACT BOOK

# ***THE ETHICAL IMPERATIVE***

2018 ACSA 106th Annual Meeting **ABSTRACT BOOK**

## **CO-CHAIRS**

Amir Ameri, University of Colorado Denver

Rebecca O'Neal Dagg, Auburn University

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University of Colorado Denver



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## Open - Pedagogy

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Date: Thursday, March 15, 2018

Time: 2:00:00 PM - 3:30:00 PM

Topic Chair: Mehrdad Hadighi, Pennsylvania State University

### Creating Equitable Learning Environments in Architectural Design Studios

David Kratzer, Jefferson | Philadelphia University + Thomas Jefferson University

Evan Pruitt, Jefferson | Philadelphia University + Thomas Jefferson University

In a traditional architectural studio, spatial environment and pedagogical approach are intrinsically linked to promote an interactive process, which is open, active and public. The learning mechanisms within architectural education harnessed the techniques of “project-based learning” long before the term became a defined academic approach in teaching the complexities of real-world problems.

Although extroverted, “ambiverted” and introverted temperamental tendencies are in a constant state of flux, it can be hypothesized that current project-based learning pedagogies and the environments within which they are implemented cater to students and faculty with extroverted tendencies. In years past, however, architecture students who identified as introverts were encouraged to construct their own learning lairs within the studio, limiting their public participation to formal reviews. Group projects were also less common, allowing introverts to remain shielded from open, active and public dialogs. The increased push towards interdisciplinary group based learning in addition to mandated open floor plans have diminished the opportunity to simultaneously exist within a studio environment while maintaining personal boundaries. As a result, introverted students are forced into a milieu that might inflict personal discomfort and academic hesitation.

This paper explores the dilemma of students with introverted tendencies operating in the more extroverted project-based learning systems and their corresponding environments. The paper concludes by proposing a studio structure that promotes equitable learning environments for students of all temperaments and learning preferences. Findings from a “first run” summer studio that examined student engagement, participation and productivity under varied pedagogical and spatial environments will be offered.

### The Academic Supports Provided to African American Female Students in Undergraduate, Pre-professional Architecture Programs.

Theodore R. Sawruk, University of Hartford

Even with the increased number of minority graduates from architecture programs, African American females still make up less than 0.2 % of all licensed architects in the United States. While, increasing diversity within the field of architecture continues to be a priority for both the academy and the profession, one can ask whether current architecture programs are doing enough to help Black women successfully engage and complete undergraduate, pre-professional curricula. Critical race theories suggest that when a student, of any background, cannot recognize themselves within the institutional structure and academic curriculum; or they feel they are being treated with a ‘one size fits all’ frame of reference, there is a loss of individualism and identity, which leads to personal dysfunction. Eventually

this alienation causes the student disassociate and eventually withdraw from the degree program and/or the institution at large.

This qualitative, single-case study explored how, if at all, three African American female students were able to engage their undergraduate, pre-professional architecture curriculum. It represents scholarly discourse related to the professoriate and the scholarship of teaching and learning. This investigation examined the characteristics of undergraduate architectural programs, from the perspective of their academic curriculum, faculty teaching methodologies, and the design studio (classroom) environment. The intention of this pilot study is to shed light on the educational practices that currently exist within architecture programs and determine how, if at all, they mitigate or extend the barriers that traditionally limit the success of women of color in architectural education.

## **A Faculty-Librarian Collaboration in the Undergraduate and Graduate Degree Project and Thesis Preparation Courses**

Cathryn Copper, Woodbury University

This paper discusses the insertion of information literacy at arguably the most critical point in the academic curriculum. Central to the discussion are practical aspects such as the formation of the faculty-librarian co-teaching relationship, the logistics and process of co-teaching, and qualitative and quantitative benefits to student academic achievements and library resources and services. Results of the experience focus on assessment of the co-teaching model and the benefits of collaboration in architecture education

# **A Question of Leadership: The Citizen Architect and Public Interest Design I**

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Date: Thursday, March 15, 2018

Time: 2:00:00 PM - 3:30:00 PM

Topic Chair: Kevin J. Singh, Louisiana Tech University

## **The Ongoing Dilemma of Professionalism**

Robert Corser, University of Washington

While architecture and design can be considered to fall under the umbrella of the arts, key differences make architectural practice distinct from arts based community engagement, and in some ways problematic. This paper focuses on traditions of professional organization and oversight that both raise expectations for civic responsibility and simultaneously present institutional challenges to deeper engagement. While most concepts of professionalism pay lip service to the public good, I will argue for the importance of maintaining and expanding the values of community engagement that wax and wane in architecture and design education. I will characterize an approach of Design Engagement as contrasted with Design Assistance and offer some principles that might foster more truly collaborative and publicly-engaged design practices.

## **Open Source Design**

Brian Kelly, University of Nebraska-Lincoln

Disruption is defined as a change in the long-accepted business model through the introduction of new methods, often lead by technology. The automotive industry replaced human workers with robots to carry out repetitive tasks in mass production lines. The printed newspaper found users wanting to curate their own content, immediate reporting/delivery, and lower prices. The music recording industry was forever changed as once illegal social networks opened up a new model for searching, purchasing, curating, and ultimately sharing music for profit. The hotel industry is currently being forced to change with the increased use of websites like Airbnb and VRBO where people can economically rent a local apartment or room for a short period of time in almost any city. The taxi industry is being challenged by services like Lyft and Uber which are putting control back into the hands of the consumer. Very few industries are immune, and the common thread throughout is the injection of new technology into industries who were not able to maintain status quo in their new reality.

During the 2016 AIA national convention in Philadelphia, Rem Koolhaas gave an interview in which he cautioned the profession of architecture about an uncertain future. Regarding to the pace of the profession, he stated, "Architecture is a profession that takes an enormous amount of time. The least architectural effort takes at least four or five or six years, and that speed is really too slow for the revolutions that are taking place." (1)

The post-Renaissance profession of architecture has been largely unchanged with regard to accessibility, authorship, and copyright. New technologies have been fully adopted and integrated into the profession, but that technology is also

available to a group of novice designers who are engaging the design process without traditional academic training. As well, designs are authored by multiples, and content is shared at large and integrated at will. This begs the question of how the discipline might engage this contemporary context where the pace has accelerated, authorship is difficult to assign, and users are more engaged partners in the design and construction process. This paper will discuss the discipline of architecture as a prime place for disruption and change brought from the outside through a desire to make the design process more engaged, objective, and transparent. This change presents opportunity for architects to lead by example and engage the public in ways that are inclusive and collaborative.

(1) Thomas Goetz, "Open Source Everywhere" Wired, 1 November 1 2003, accessed 25 September 2017, <http://www.wired.com/2003/11/opensource/>

## Social Engagement and the Construction of Place

Katie MacDonald, Virginia Tech

Today's Citizen Architect must navigate a world rewired for networked experience. The internet's early days hatched cheap and accessible sites where users could connect regardless of origin or physical location, providing a new model for building communities and constructing lean-to-produce, potent, and multivalent places. If the internet saw the advent and realization of place as a purely social construct, studying networked engagement and the social art practices that followed offers insights into how architects might galvanize participation and meaning back into the physical world.

While place theory once emphasized the way that the physical informs meaning, place attachment, and satisfaction, in this new world, symbolic meanings, via experience and engagement, might instead be formed with the intention of creating place – virtual or physical. "Social Engagement and the Construction of Place" addresses how today's Citizen Architect can adopt strategies from networked experience.

Recent developments in socially engaged art build on the frameworks of internet art, but resituate the techniques of such immaterial places to physical spaces IRL (in real life). For both network art and socially engaged art practice, the dominant vehicle is public discourse. Both draw power from their ability to create art as a social construct regardless of budget or the existing built environment, presenting an opportunity to bridge class distinctions and foster a spirit of hope that is more shared sentiment than visible, physical reality.

Just as architects have borrowed from the formal preoccupations and conceptual streams of art practice, they will benefit from once more going to the well in order to integrate ethics into architectural education, theory, and practice. Building on the approaches of social media and network art, socially engaged art practice offers a lean and effective method for developing and making visible social networks within physical communities and breathing life back into impoverished and obsolete spaces. Rather than physical intervention, such art focuses on cultivating public discourse to create meaning, culture, and place. The success of multidisciplinary efforts in this vein suggest that architecture too can align with

social practice, building social infrastructures which in turn strengthen physical environments and communities.

## A Socio-Technical Approach to Participatory Design – Learning from Scenario-Based Planning Practices

Ming-Chun Lee, University of North Carolina at Charlotte

Participatory design is a response to the demand to have voices heard and ideas taken from those who are involved in the design process. It sees community members as citizen designers who play an active role in shaping the formulation of both the design process and its results. Architects and community planners depend on proper tools to engage and interact with citizens. Scenario planning is one of such tools enabling designers and community members to work together to address uncertainty in future community growth and develop a range of possible design solutions that may lead to alternative future conditions. This essay first traces the history of scenario planning and attempts to understand its application to community design from a socio-technical perspective, which sees community design as both spatial inquiry and communicative action. This essay then discusses a demonstration project conducted between 2011 and 2014 in Central Texas. This project employed scenario analysis methods as a way to conduct community-based participatory design processes. Key steps to implement this scenario planning exercise, such as visioning, compiling data, conducting community design workshop, drafting future community growth plan, are highlighted in the essay to illustrate this unique socio-technical approach to participatory design.

## Shaping New Forms of Citizenry through an Adaptive Design Process

Shannon Criss, University of Kansas

Much of what we consider to be architecture practice responds primarily to a client's specific needs in relation to a particular, bounded site. Clients often present architects with a site, a design challenge, a limited budget and scope of work. The project is typically guided by engaging with the client through a contracted relationship. The traditional course is for the architect to begin making pre-design decisions about site orientation, program needs, and aesthetics. After that, the progression moves from schematic and conceptual designs to more developed designs, ultimately resulting in a set of construction documents that serve as a limited contract. This relationship is largely governed by professional practice standards through the American Institute of Architects (AIA), where expectations, risks and liability of the architect are limited and managed. The difficulty in this linear and narrowly defined engagement is that these processes are inherently technical as a way to navigate restrictive time, budgets and design intentions. While an architect's responses to design challenges are often adaptive as related to form making, a framework that is strictly client-centered prevents greater consideration of the needs and desires of the larger community. A new call for how we educate students is needed, one that expands the role of practice to meet the needs of public interest.



## The First Hundred Days

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Date: Thursday, March 15, 2018

Time: 2:00:00 PM - 3:30:00 PM

Topic Chair: Heather Flood, Woodbury University

### What is Foundation? Are We Really on Solid Ground?

Liane A. Hancock, Louisiana Tech University

We cannot assume that foundation studio sits upon solid ground – flows in design trends, curricular change, technological advances, and even concern about student retention puts the first studio at risk of becoming unmoored. In resistance, the first studio is often either an impenetrable bulwark that has stood the same for many years, or it becomes an orphaned experiment separated from the rest of the school's pedagogy. How can we ensure an inclusive, accessible, and resilient introduction to the study of architecture? How can we provide a microcosm of the specific pedagogical character of both the major and the school? Students are choosing what they will do with their lives; ethically we must provide them with adequate data by which to make that choice. Beginning with a star map dataset, students in this course learn to operate from and build upon a set of constraints to design a composition from the simple building blocks of points, lines, and surfaces. Next, using city maps as stimulus, students bridge the complexity and specificity of context through: analyzing, classifying, and developing patterns that range from self-similar to unexpectedly distinct. Finally, in a full scale installation of forms within an exhibit space, the students engage in contextual negotiation and collaboration within the group, with each student delivering design decisions that oscillate between their individual ideas and the group's broader set of rules and data inputs. This studio satisfies core competency on a number of levels. It provides skill building and technical objectives, enhances conceptual and critical thinking, and grows students' confidence in formal response and intuition. Most importantly, this course offers a microcosm of our University's course of study, providing students with the data they need to be able to choose the major with confidence.

### Reconstructing Knowledge: Recombinant Strategies for Multicultural Beginning Design Pedagogy

Pavlina Ilieva, Morgan State University

As the world settles into a perpetual state of crisis, architecture becomes increasingly viewed as an inevitable victim, a solemn enabler or an urgent remedy to modernity's relentless narrative of disaster, conflict and failure. How to prepare designers to address such complexities on the local and global level has been at the forefront of architectural education for the past two decades as evidenced by the social, ecological and technological agenda that has settled in architectural discourse. The architecture field embraced the new millennium with an interdisciplinary design ethos, urge for inclusivity and a bold sense of agency in social, environmental and economic change. The act of implementing these principles, however, has proven challenging as academia struggles to maintain the status quo of architecture as fundamental to addressing spatial concerns and the making of buildings while evolving curricula to include the search for solutions

to pressing local and global matters. As the diversity of participating constituent on all sides has never been greater, architectural education is called upon to revisit pedagogical strategies that respond to a wider variety of student groups entering the field and also prepare emerging professionals for the ethical challenges of a dynamic, multicultural world.

This paper explores the challenges and benefits of two opposing learning models in Beginning Design education - the experiential versus referential. Reflecting on the development and implementation of the Beginning Design curriculum of the pre-professional Architecture and Environmental Design program at Morgan State University, a minority serving public institution, the author proposes a constructivist learning approach that uses recombinant strategies from the two established pedagogical models. The reconstructive model of learning, which recalls prior experiences and observations as a point of departure, seeks to mediate the gaps between students' diverse academic background, cultural reality of space and goals for the future with traditional architectural pursuits and contemporary disciplinary concerns. In response to the emerging needs of a multicultural design education, key strategies involve 1) use of students' diverse experiences and perceived lack of familiarity with the field as a point of departure for expanding architectural cannon across disciplines, scales and cultures, 2) develop habits of the mind and hand that nurture a personal perspective while fostering a culture of rigor and care, 3) distance from high architecture in formal terms in favor of more socially concerned design problems relative to students' motivation for entering the field.

As the architecture field envelops sweeping agenda that urges the design of new policy, realignment of disciplinary connections between various fields and reevaluation of cultural habits and norms, Beginning Design pedagogies that embrace multicultural recombinant strategies would allow architecture academia to attract and retain a more diverse student body and train more impactful professionals, motivated by and ready to address their own spatial understanding as it relates to the ethical imperatives of our time.

## Fierce Urgency of Now, Architecture Education and the Foundation to Justice

Bradford C. Grant, Howard University

In our current political times, our students are faced with pronounced heightened social, racial and political challenges leading to questions of how can they actively help their communities and transform society. Many teachers in architecture also face the question of how can our courses and lessons be a catalyst to students for a structural critique of inequality and oppression and a call for transformational action. Our students come to us with an interest in these issues, but often with a lack of confidence, love and understanding of their place in our profession. Before our students, can better foster compassion, inclusivity and justice through architecture and design, they must love, understand, have confidence in and communion with themselves. It is paramount that students feel secure and feel good about themselves as they move to transformational action for others.

The Portrait Project explores a process that works to uncover Howard University first year students' (primarily Black and other students of color) identity and agency leading to increased confidence and love of themselves in the world of design. This process and project is an attempt to increase their awareness and understanding of themselves and establishes the foundation for them to make transformational change through design.

## What About the First Hundred Days at a Community College Architecture Program?

Randy A. Steiner, Montgomery College

Where do we start as future architects? Are we fascinated by the social impact of our design solutions? Are we intrigued with the possibilities of materials and their structural potential? Are we so fond of problem solving that anything from English literature to Biology spurs our creativity? Perhaps there is no single start to our paths.

One foundation could be at the community college architectural program [CCAP]. I propose to address these questions within the context of the CCAP. The first hundred days for an architecture student can be magical but alarming. There is much to learn. How do we merge the marching with imagination through academics and smacking into the reality of the workplace?

Based on data collected from over 122 CCAPs, this proposal offers their approach of "Beginning Design Pedagogy."

First, it will address offering a wide range of architectural courses in the first semester to beginning architectural students.

Second, this proposal will address the ethical responsibility of educators to provide future architects of the 21 st century with appropriate skills for the 21 st century profession.

Lastly, new models of "Beginning Design Pedagogy" need to adapt to the learning style of members of Generation Z [born between 1998 to 2004], our current students. They have never seen a world without the Internet! CCAPs can provide future architects with one way to immerse themselves from the first day with a strong foundation in conceptual and technical skills. It is just one of many paths but a valuable one.

## In The Land Of The Unknowing, Originality Is King

Kyle Miller, Syracuse University

More so than any other time within the last three decades, foundation studies in architectural education have the responsibility to introduce the fundamentals of architectural design and the historical discipline upon which all of our contemporary genres or sub-disciplines of architecture grow. More often than not in beginning design studios, this historical context, the basis of knowledge for our discipline, is eschewed in favor of design assignments that open up the possibility for intuition and instinct to serve as the basis for action. In this context, and as the saying goes “In the land of the unknowing, originality is king.” This paper will present three charges for the first hundred days of architectural education and share student work that results from prioritizing the instruction of fundamental formal issues within architectural design. In order, the charges correspond to the construction of design assignments, working methodology for students, and exercise output.

## **A Question of Leadership: The Citizen Architect and Public Interest Design II**

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Date: Thursday, March 15, 2018

Time: 4:00:00 PM - 5:30:00 PM

Topic Chair: Kevin J. Singh, Louisiana Tech University

### **University-Community Partnerships: Managing Expectations & Leadership**

Alexis Gregory, Mississippi State University

"[A] troubled universe can no longer afford the luxury of pursuits confined to an ivory tower...[S]cholarship has to prove its worth not on its own terms, but by service to the nation and the world." Oscar Handlin (1)

Architecture programs have worked with community partners for some time, and the benefits to the students and university have been proven by various studies. (2) However, the community partner does not always benefit, which creates a lack of trust, and lack of interest on the part of the community partners to working with universities. (3) This relates to the typical "Ivory Tower" problem that universities face generally, and the lack of a reciprocal relationship with a community partner just exacerbates the issue. This paper posits that both universities, specifically architecture programs, and community partners need to start their relationships with managed expectations of what the collaboration will create, how long it will take to reach project goals, and how the leadership structure will evolve over time. This will help to instill a relationship of trust that can create egalitarian partnerships to dispel the image of the "Ivory Tower." (4) Once trust is achieved both architecture students and architecture educators can lead community partners into leadership positions of their own to take charge of the public interest design projects that are created together.

(1) Boyer, Ernest L. "The Scholarship of Engagement." *Journal of Higher Education Outreach and Engagement*, vol. 20, no. 1, 2016, pp. 27.

(2) Gregory, Alexis and April Heiselt, "Reflecting on Service-Learning in Architecture: Increasing the Academic Relevance of Public Interest Design Projects." *GLOBALIZING ARCHITECTURE/Flows and Disruptions – Proceedings from the 102nd ACSA Annual Meeting*, Spring 2014, pp. 404-410.

(3) Strier, Roni. "The construction of university-community partnerships: entangled perspectives," pp. 83.

(4) Tal, Rinat Botbol, Tovi Fenster, and Tal Kulka. "Academy-Community Partnerships: Challenges and Changes in Israeli Urban Regeneration Projects." *Journal of Higher Education Outreach and Engagement*, vol. 19, no. 3, 2015, pp. 65-66.

### **Refining Process, Expanding Practice: Public Interest Design Fieldnotes from the South**

Emilie Taylor, Tulane University

University-based Community Design Centers have seen a resurgence in recent decades, and current inequities and social movements have given greater urgency to questions of who can access design and how. This paper outlines lessons learned over 12 years in a design center's approach to educating citizen-

architects, rethinking design processes, and executing projects with a deep commitment to engagement, access, place, and design excellence. We use the design process as a powerful coalition building tool creating space for more voices in the design process, and are able to prove the value of design excellence in our city and shift conventions around who architects serve, what they work on, and why design matters. Our work is situated within a broader body of Public Interest Design work that is concerned with bringing design services to traditionally underserved communities and developing robust processes of engagement. What follows are a few of our strategies for crafting a thoughtful project selection process, building trust and capacity within project teams, and rethinking the education of designers towards more collaborative and inclusive processes.

## A Hunt for the Urban Tectonic: Deriving Relevant Urban Architecture from the Existing Fabric of Our Cities and Communities

William Joseph Doran, Louisiana State University

The urban tectonic can be defined as the way cities and communities are constructed from multiple pieces – objects, forces, people, and meanings – interwoven into a larger whole of overlapping systems. Even though it is the ultimate destination of everything we create as architects, we often take for granted the way this interwoven fabric, or urban tectonic, is designed ... or not designed. It is hyper-relevant to and significantly impacted by our work – and should thus stand as an important facet of architectural education. How do we teach our students to look beyond the physical things we see and create as architects, to consider the underlying fabric of the urban tectonic? Could the actions, relationships, and experiences of the city drive the way we select sites, develop programs, and build the financial and social capital that sustain architecture? Integrating these things into the design challenge has the potential to make our practice much more relevant and inclusive of the wisdom of the people and places in which we work as non-traditional, but fruitful sources of design intelligence. In this light, cities and communities are not blank slates onto which we draw plans or place projects. Rather, they are the most important materials from which to develop our work.

“...architecture and civilization develop hand in hand [...] there is little use in discussing the needs and promises of architecture without relating the shell [the building] itself to the informing changes that may or may not take place in the life of the community itself.”

-- Lewis Mumford, 1924

This paper explores a series of research and design exercises developed for a seminar course called Studies in Community Design, that directly engaged students in the urban tectonic as a generator of new, relevant architectural programs, concepts, and ideas. Research began with a series of field assignments, interviews, diagramming exercises, and discussions that prompted students to directly engage objects, people, and activities in the urban environment. Students photographed what they saw and were challenged to connect the objects, activities, and people in their photos to larger-scale relationships and systems, and the meanings behind them. They looked for

informal activities occurring in the city like ad-hoc homeless shelters or advertisements stapled to electrical poles and interviewed people engaged in simple urban activities like riding the bus or enjoying a public park. Each exercise was meant to document some type of relationship, system, or practice in the form of a written and graphic entry into a 'Dictionary of the Urban Tectonic.' Students were then asked to identify and explore a specific problem documented in the dictionary to address with a small-scale design intervention.

The work derived its motivation and reason for being from the city itself, rather than a client or developer. This paper explores the process, motivation, and implications of the field assignments, the problems students identified, and the interventions they proposed.

## Strengthening Public Interest Design through the Application of Service Learning Pedagogy: A Case Study

Sallie Hambright-Belue, Clemson University  
Martin Holland, University of Guelph

Service learning pedagogy provides a compelling tool in the potential transformation of young designers into "Citizen Architects" as the engagement of students with the problems that plague our communities, lie at the very heart of Public Interest Design practice. This paper details the ongoing efforts within the School of Architecture at [redacted], with a local, non-profit organization called the FEED & SEED. The FEED & SEED's mandate is to mitigate the social inequities present within the disenfranchised neighborhoods within West Greenville, South Carolina through providing affordable, nutritious, and locally-grown food. This organization sponsored a series of design projects that provided our students an accessible conceptual framework as an entrée into vexing social problems associated with food production and distribution within the city. The studios served as an excellent introduction into community problems that Public Interest Designers address because these intractable problems should be solved holistically, and access to fresh, local and nutritious food has many benefits and positive impacts.

The civic interventions and productive community landscapes described are meant to create both compelling urban spaces that are valued and regarded as shared civic assets. More importantly, from our perspective as educators, active student engagement with the community is essential to the pedagogical mission of preparing students for Public Interest Design. In turn, the design studios detailed here understood and positioned the students as engaged designers who are desperately needed in our communities, town halls and professional offices. However, unlike many Public Interest Design projects within academia that rely on the design/build process resulting in a physical product, we directed the students to focus on the process of design and working with the community to understand specific challenges that become evident when studying something as essential as equitable and healthy food access.

The case study outlines the use of service learning as a model for teaching Public Interest Design including project selection and the delivery of four primary learning objectives: Reflection, Engagement, Empathy, and Citizenship.

## **Drawing in the Post-Digital Era: From Exactitude to Extravagance**

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Date: Thursday, March 15, 2018

Time: 4:00:00 PM - 5:30:00 PM

Topic Chair: Pari Riahi, University of Massachusetts, Amherst

### **Breaking BIM: A Transformative Design Methodology for BIM**

Seth McDowell, University of Virginia

Seeing is a fundamental requirement for design exploration, and the visual intimacy provided by a virtual Building Information Model is unmatched by traditional modes of representation (i.e., orthographic projection and physical models). When the Bauhaus educator Josef Albers migrated to the United States, he taught drawing and design exercises that aimed at “making open the eyes,” encouraging students to use representation as a tool for seeing new things and discrediting assumptions. Distinguishing between “actual facts” and “factual facts,” Albers encouraged students to deploy drawing to study “actual facts”—facts which are “open-ended, and lead to additional exploration (Albers, 1965).” The better we can “see” design iterations of these “actual facts,” the more informed our decisions become.

Building Information Modeling (BIM) is no longer just a tool for project delivery and production. It is now a critical, precise tool for design and analysis. This research on “Breaking BIM” seeks to identify new relationships between design processes and BIM that leverage the computational resources for design objectives. The paper outlines three approaches to breaking the constraints of BIM with more intuitive workflows for design. These include associative modules, conceptual massing, and component hacking. The work here is a summary of four years of experiments in dissecting Autodesk’s Revit. The explorations occurred as teaching activities and within my own design practice.

A methodology will be described for designing through relational objects that identifies BIM as a process of transformative design. With a transformative design methodology, the designer is given a default typology, and must deconstruct or reconfigure the typology to establish a new type. This process of object transformation characterizes design customization strategies in common BIM platforms like Revit.

### **Digital Shadow**

Alex T. Anderson, University of Washington

While architects sometimes lament the turn to digital representation and its affect on the quality of design, it is not clear that digital tools preclude architectural thinking any more than descriptive geometry did a hundred years ago. This paper considers whether digital tools might help activate poetic imaginations in the same way that constructing and rendering shadows did in the past. Just as architects needed to look beyond the allure of mathematical puzzles in descriptive geometry, architects today can use digital simulation of light effects to understand architectural ideas more fully. This paper describes an intentional



process of early instruction in architectural representation that can help set this way of thinking in motion.

## Experiments on Timescape: from Camera Apparatus to Frame Differencing

Catty Dan Zhang, University of North Carolina at Charlotte

The paradigm of drawing has always been closely affected by evolving tools and techniques. Computing, scanning, imaging, programming, simulating, are only a few examples that have brought revolutionary influences on the drawings, representation, or visual culture at large. This paper examines visuals in association with tools that produce them, posing questions on the longevity of techniques, as well as the transformable potential of design emerging from visual experiments.

Taking time as a material to be edited, this paper presents in depth precedent analysis and experiments on capturing and assembling swift movements that occupy a period of time and certain amount of physical spaces either in 2D or 3D. Excavating history of science, photography, and machine vision, the research seeks opportunities of autonomously generating drawings and images mediating perception and cognition within spatial-temporal frameworks.

The first part “The Mechanism” traces an analogy from techniques of representing time used in chronophotography, to the time based trace done with stroboscopic devices and lights, and to image processing and computer vision algorithms that manipulate pixel intensities. Cutting into the smallest manipulatable units- lens in camera apparatus and pixel in computer graphics, the analysis intends to connect basic shared principles for capturing temporal datum legibly.

The second part “The Drawing” presents a parallel set of methodology and related projects that generate visual images engaging assemblage of tools. Motion Lens(es) proposes design prototypes that extend the original functionality of camera apparatuses into spatial configuration. Based off the abstracted structure of photographic systems, these designed instruments consist of light distribution, laser beam projection, or extension of digital camera. Animated visual patterns are created responsively from subject matters in motion. Record Mirror, on the other hand, explores digital structure for constructing a similar visual effect. It assembles delayed time from live video feed into visual promenades. Operating on pixels of selected frames, different length of time periods recording oneself is controlled by a series of variables, turning the practice of trace conducted in Marey’s chronophotography into a real-time installation.

## More Translations (from Drawing to Building)

Galo Canizares, The Ohio State University

"[Digital technologies] are no longer the tools for making: they are primarily tools for thinking."

Mario Carpo, *The Alternative Science of Computation*

"The theme of this article is translation...There are all those other identically prefixed nouns too: transfiguration, transformation, transition, transmigration, transfer, transmission, transmogrification, transmutation, transposition, transubstantiation, transcendence, any of which would sit happily over the blind spot between the drawing and its object, because we can never be quite certain, before the event, how things will travel what and will happen to them on the way."

Robin Evans, *Translations from Drawing to Building*

In 2013 media theorist, Lev Manovich, wrote, "[t]here is no such thing as 'digital media.' There is only software." In other words, because all digital artifacts rely on a set of interpretations of virtual signals, software and media today are inseparable; to think of one is to think of the other. As such, designers have come to understand acts of making as fundamentally tied to a set of programs and interfaces that digitize our ideas by translating them into electric impulses. This has been the case in architectural design for the better part of the previous decade and is certainly the case today. However, while this phenomenon has led to a set of norms concerning the production of digital objects, an increase in the variety of tools available to architectural designers (particularly from video game design, visual effects industries, open-source initiatives, and app developers) has opened the door to new ways of producing and understanding architectural media. The goal of this paper is to examine architecture's evolving relationship with software, and suggest a reevaluation of the role digital mediums play in architectural education.

Beginning with Robin Evans I would argue that architects have always had an interest in examining closely the mediums on which they work. Since architectural media has now evolved into primarily virtual information, we must re-examine that relationship. Taking Lev Manovich's dictum that "there is only software" and recent pedagogical discussions on "computation as a background condition of our reality," I will suggest that, much like they cover Brunelleschi's rediscovery of perspective or Alberti's *De Pictura*, design curricula must tackle the history and theory of software in order to fully comprehend the tools and techniques involved in contemporary architectural design. This approach would allow designers to critically reflect on the impact of software on culture, and in turn the effect of digital culture on architecture.

## That Guy There: The New Convention of the Populated Plan

Dora Epstein Jones

Over-familiarity with the conventions of architectural representation in plan and perspective, paired with the advent of dimensional digital modeling software, has brought us to a new and now pervasive drawing convention: termed here as the

“populated plan.” First seen as a form of cartooning in the work of OMA, and then gradually made digital under BIG, MOS, Jimenez Lai and Andrew Kovacs (to name a few), the “populated plan” is a canny, perceptual machine, not just for viewing the spaces of architecture, but also for imagining the variety of activities that inhabit these spaces. The “populated plan” is a friendly kind of device, almost childlike in its Where’s Waldo-wonderment, and filled with benign cars going to and fro, impromptu trees, lots of little people hard at work, a catalog of post-Ikea modern furnishings, and of course, plenty of mischief. “The populated plan” is a great way of enlivening an otherwise “boring” building using readily available software, and as such, it has become, very quickly, a popular choice among students of architecture, well, everywhere.

This paper examines the rise of what is rapidly becoming a new convention in architectural drawing. It tracks the brief history of the idea, and examines the relative ease of adaptability of this technique. In so doing, the paper describes the operations and mechanisms necessarily in play for a convention to become conventional. This paper also investigates the implications of the “populated plan” as a representational device, namely the scalar, social and political ramifications inscribed within. “Populated plans” are filled with representational people, conducting lives in orderly and disorderly ways. As such, “populated plans” readily accept the role of architecture as a spatially-loaded staging ground for social interactions, economic transactions, and political reactions. Far from the mute abstractions of the plan and section, the “populated plan” suggests architectural space as a space filled with human potential - some predictable, as in a Richard Scarry “What Do People Do All Day?” way, but more often, unpredictable, messy and hopeful. Finally, this paper asks us, as architectural instructors and critics to see the “populated plan” as far more than a passing fashion, and rather as a perfect product of a post-digital era of drawing - one that derives its sensibilities from the perspectival sketch of old while exploiting the digital medium for its fineness of detail and richness of textural and color options. We must ask ourselves - is the “populated plan” a mere crutch, or can we insist that a new drawing convention carry human meaning, as it should?

## **The Ethics of Neo-Orientalist Architectural Production**

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Date: Thursday, March 15, 2018

Time: 4:00:00 PM - 5:30:00 PM

Topic Chair: Faysal Tabbarah, American University of Sharjah

### **Designing Pedagogy against Architectural Iconicity**

Jason F. Carlow, American University of Sharjah

This paper seeks to address several of the issues surrounding the promulgation of and resistance to iconic, Neo-orientalist architecture in Dubai within the pedagogical agenda of an academic, architectural design studio. In formulating a design brief focused on high-rise tower typology in Dubai, several questions became important to the framework of the studio: How could the students in the course better understand the proliferation of iconic architectural forms in Dubai and other rapidly developing MENA cities and strategize a method for designing in response to that context? What are the regulatory and socio-economic incentives driving the construction of iconic buildings, inspired by both Western and Neo-orientalist styles in Dubai that students should be aware of? When designing for an extreme climatic environment, how can a building envelope be used as a starting point in the formation for unit planning, program distribution and overall building form? The studio was conducted to investigate a culturally and climatically appropriate mode of design for high-rise towers in the Dubai context while avoiding the exploitation of architectural uniqueness or innovation for the sake of iconicity.

### **The Challenges of Retrieving the Traditional Courtyard Houses of Baghdad**

Zahraa Dabbach, University of Cincinnati

Modern day Baghdad faces the daunting task of retaining the characteristics of a traditional Arabian city in the face of an invasion of modern detached houses that have disturbed the complex, coherent structure of traditional neighborhoods. The question here is why have traditional residential units not yet been retrieved and what are the challenges and obstacles of restoration? The courtyard represented the heart of the Arab house. It was located where all habitable and service rooms were grouped and looked toward daily light and natural ventilation and recreation as well. The traditional house was a place for gathering and entertaining. The clustered pattern and spatial arrangement of attached houses had been adapted to serve and accommodate extended families. For decades, this traditional family structure had essentially contributed to building a strong, steady social relationship. The international style of the 1930s in Baghdad lost the most substantial characteristics of the residential architecture. The critical political situation in Baghdad has also represented a fundamental obstacle of restoration. Contrary to most previous studies that talk about the advantages of traditional courtyard houses, this paper focuses on the challenges of the restoration of traditional courtyard houses in Baghdad. To answer the mentioned question, the paper examines the possibility of retrieving traditional courtyard houses in Baghdad under three main categories: modernization and contemporary Western views, family structure and social mobility, and current political issues.

Keywords: traditional compact house, modern detached house, social mobility, international style, internally displaced person (IDP)

## Neo-Orientalism and the Search for Identity

Reema Abu Hassan, American University of Sharjah

The recent emergence of neo-orientalist architecture has become prevalent within the non-western world. This raises ethical questions about the way recent architectural and urban developments have been attempting to keep up with globalization and western technological advances while also holding onto their national identities and collective memories. This struggle of mediating local cultures and modernity as a reflection of society within the built environment has been a concern since the start of post-colonialism and orientalism. This paper will look at the way humanism kick started this issue and how the resulting orientalism and colonialism have influenced the built environment through a critical look at modernity, national identity, manipulated and constructed memories and the rise of neo-oriental architectural production. We will also look at the non-western world's constant need to define and reference historical and cultural roots in the production of today's architecture and the role that it's colonized past plays.

## Open - Ethics

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Date: Friday, March 16, 2018

Time: 9:00:00 AM - 10:30:00 AM

Topic Chair: Michael Hughes, American University of Sharjah

### Medical Ethics as a role model for developing Architectural Ethics

Tom Spector, Oklahoma State University

Victoria Beach, a past chair of the AIA National Ethics Council, has called the architecture profession, not unethical, but, rather anethical—that is to say, the codified ethics by which architects practice is so weak that it essentially provides no guidance. Hence, we can do more or less what suits self-interest within the confines of legality. And of course the AIA has been loathe to take up substantive positions on such serious ethical matters as supermax prison design—as pointed out in this call for papers. But rather than castigate ourselves, we can usefully examine how another, more ethically aware, profession—the medical profession—did much to overcome its ethical disarray through the establishment of outlets for discourse and the identification of important topics for long-term discussion during the last third of the twentieth century. These days, physicians in the English-speaking world can access well-reasoned positions and ongoing discussion on an enormous variety of ethically-charged situations. We architects can look to both the process by which medical ethics became an established sub-discipline and the improvements to practice that ensued as a source of guidance for our own nascent sub-discipline.

### The Ethics of Study Abroad: Costs and Benefits

Kristin Nelson, University of Florida

James Leach, University of Florida

Following the recent experience of teaching in a study abroad program for the first time, the authors set out to better understand the costs and benefits of this common educational model in schools of architecture. The primary goal is to compare the educational and intellectual benefits of study abroad for the student against the ecological, economic, and sociocultural costs incurred. This paper examines the ethical issues associated with engaging in extended international travel for primarily educational purposes, and seeks to consider potential adjustments to ameliorate the negative impacts of such activities.

## Settlement Communities: Projecting Affordable Housing for Refugees in Footscray, Melbourne

Jennifer Ferng, University of Sydney

Sophia Maalsen, University of Sydney

Based upon our architecture/geography/urban design studio in Footscray, Melbourne (July 2017), this paper contends that affordable housing for migrants and refugees should begin by including these groups as active agents of creating their own domestic spaces. This mixed undergraduate and graduate studio utilized survey data from Settlement Services International (SSI) to allow University of Sydney students to formulate their own architectural briefs based on these answers from refugees. Student teams were drawn from various degree programs and within the classroom modelled the anticipated interdisciplinary collaborations that might take place when designing affordable housing. In effect, refugee input and student proposals worked together to explore Georg Simmel's idea of the migrant stranger (through the notion of social distance) while reflecting upon contemporary notions of insider/outsider within the Australian national imaginary. By using the answers provided from anonymized surveys, students were able to construct their own housing schemes that met the specific needs of refugee profiles, represented in the Footscray community. Bottom-up architectural design should address how refugees as designated stakeholders play an important role in diversifying local communities and how their feedback can enhance customized options for affordable housing.

## **A Discipline Adrift? Teaching Architectural Ethics in Today's World**

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Date: Friday, March 16, 2018

Time: 9:00:00 AM - 9:00:00 AM

Topic Chairs: Paul W. Long, Ferris State University  
Chris L. Cosper, Ferris State University

### **On the Value(s) of an Architect**

Anastasia Cortes, Virginia Tech

This paper situates architectural ethics in the context of practice by using stakeholder theory and the concept of professional judgment to describe the activities of architectural practice. Architects are taught the skills necessary to make ethical professional judgments in the contexts of design and professional service, but they are not necessarily taught how to effectively communicate the value of those skills to those outside the profession. Stakeholder theory provides a framework to describe the practice of architecture in a way that enables non-practitioners to appreciate value of the complex decisions and activities performed by architects.

### **Crutches No More: Reframing Philip Johnson's Seven Crutches as Pedagogic Tools**

Kyle Schumann, Princeton University

With the discipline of architecture expanding into other fields and the ethical positions of the profession being redefined, a look to past lessons, in retrospect, can equip us with tools to address these concerns. Philip Johnson's "The Seven Crutches of Modern Architecture" provides such a perspective once the ideas are reframed as pedagogic tools.

### **The Online Moral Paradox: Understanding the Benefits of Downloadable Content on the Performance of Students in the Design Studio**

Magdy Mohamed Ibrahim, Abu Dhabi University  
Sadeka Shakour, Abu Dhabi University

This paper investigates the students' habits of using online resources in educational environments. The purpose of the study is to understand the extent that the new medium provides and the extent of benefits to students' learning. Resources that are useful to professionals might not be as helpful to students who are supposed to draft and model the most mundane elements of their work themselves. However, students do have access to the same resources professionals have with no difference nor guidance. From an academic standpoint, student users might treat those content websites as normal go-to locations to obtain readymade solutions. Does it make a difference to the quality of the students' work? What is the moral reference for such behavior? How much of such behavior should be acceptable? How can we regulate the online interaction without scientific authority?



## States of Disrepair / Acts of Repair I

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Date: Friday, March 16, 2018

Time: 9:00:00 AM - 10:30:00 PM

Topic Chair: Sabir Khan, Georgia Institute of Technology

### RE-STORE “style” as “technique”: Viollet-le-Duc’s “historiographic” attitude and restoration of design principles for architectural theory Samia Rab Kirchner, Morgan State University

Within the liberal arts education system, courses on world history are prerequisite for all disciplines through general education curricula, while specialized courses on architectural history fulfill the requirement of accredited architecture degree program. Restoration and preservation as subjects are considered specializations and usually pursued during graduate studies in schools of architecture, planning or American studies. Professionally speaking, conservation of cultural landscapes is thought of giving a new lease of life to historic built environments that either need repair or are being adapted to new purposes.

This paper explores the integrative (what I call a “historiographical”) attitude in the work of the nineteenth century French architect, Eugène-Emmanuel Viollet-le-Duc that tied his historical investigations of diverse architectural traditions, theories of significance in architecture for the industrial age, and professional practice of restoring French Gothic cathedrals. Viollet-le-Duc defined the task of the restorer as an “artist-re-creator”, who would liberate the historic edifice from “incompleteness” accrued through time by understanding the design intentions of the builders. His definition of “style” as technique, and the analogy between the principles of modern locomotives and architectural forms gave impetus to a movement in which restorers aspired to introduce liberal “improvements” to historic edifices. Examining the historical writings, practical restoration work and proposed architectural theories, this paper concludes that Viollet-le-Duc engaged a historiographic attitude to his investigations of the past, restoration in the present, and proposals for future architecture. He thought of restoration practice mainly as an act of criticism and aimed to critically and imaginatively identify what to re-store (keep or accumulate for future use).

### Repressing Repair: Hans Döllgast's Neue Pinakothek Lynnette Widder, Columbia University

Hans Döllgast’s Alte Pinakothek in Munich (1946-73) is seen as a masterpiece of post-war reconstruction, celebrated for its poetic treatment of wartime scars. The building’s reception has, however, consistently repressed the technology behind its reconstruction, from the new structural concrete cage inside its patched brick walls to the plumbing and heating needed for a functioning museum. This paper considers the building’s reception relative to Döllgast’s unpublished technical drawings. Reference to Alois Riegl’s theories of monuments and meory, which Döllgast would have known, supports the basis for a revised reading of the Alte Pinakothek to see its technical components as important contributors to its value as memorial and monument.

## The 'Iconic' and 'Everyday' Mid-century Modern- Shifting Attitudes Towards Repair and Preservation

Priya Jain, Texas A&M University

This paper engages in a critical analysis of how modern-era buildings signifying different levels of repute, function, size and perceived worth, were cared for and changed through their 'developmental history'. The author builds upon Conservation Plans prepared for two large modern institutional buildings over the last two years, to illustrate differences in how these buildings were maintained. One, an iconic structure by Paul Rudolph had a larger burden of care than another building of middling distinction designed by a local Canadian architect. Consequently, bigger liberties were exercised in decisions regarding day-to-day repair and eventual replacement of materials in one than the other. An analysis of trade catalogues from roughly the 1940s to the 1970s will provide a backdrop to this discussion and serve as a parallel of a third kind of mostly residential and commercial buildings that were built with even lesser formality.

## **Ecological Ethics (and the Role of the Architect) I**

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Date: Friday, March 16, 2018

Time: 11:00:00 AM - 12:30:00 PM

Topic Chairs: Michael A. McClure, University of Louisiana-Lafayette

Ursula Emery McClure, Louisiana State University

### **Design in the Anthropocene**

Nicole Lambrou, Academy of Art University

Asking what the ethical implications are for including the broader ecology of a place when designing for that place assumes we can manage that place in a way that is better than the alternative of not considering the broader ecology at all. An ethical responsibility to include a more inclusive ecology, or an ethical responsibility to do anything at all, implies, at least in part, the control over a process or outcome.

It is surprising, then, to consider that design in the Anthropocene takes, largely, two forms: on the one hand it is a precise and distinct intervention, as in the design a graywater system that filters and siphons water for reuse, and on the other it is the deployment of a broad set of environmental strategies in the face of climate change unpredictability, as in adaptation and resiliency planning. Architects are, in both cases, the synthesizers of expert knowledge, facilitating discussions between and among engineers and clients, whether the client is a person or an ecology. The environmental aspect of a design is added onto the building or city. Or rather, the building is inserted into a landscape whose needs are not only well-defined, from an engineering standpoint, but paramount to any subsequent design intervention.

In this framework the social (human) and the ecological (biophysical) are artificially separated. Instead, borrowing an ecosystems approach from the environmental sciences is a way to nullify the distinction between designing for humans and designing for everything else. Analyzing the environment as a set of ecosystems asks that we away move from linear investigations in favor of assessing the interaction of people with their surroundings. Doing so further acknowledges that humans are an integral part of ecology, however that ecology is defined in scope and scale. Designing for an ecology means designing social relations, rightfully reframing the act as a socio-ecological process.

Competing approaches to ethical considerations of designing for ecological restoration, as this paper discusses, are dependent on slices of realities abstracted from each perspective's view and definition of nature. To be sure, there is no single and unifying characterization of nature that can satisfy all of our empirical and conceptual inclinations. Such an undertaking is misguided. Rather than source our observations from a single place, though, we may instead tune in to the manner in which climate change creates a situation of crisis that declares itself differently across distinct cultural landscapes and creates the illusion that humans and non-humans dwell separately. This paper looks at one of those instances, the Ballona Wetlands in Los Angeles, and the contestations around it as a rehearsal for how we address the ethics of urban-natures.

## Plant ethics or an environment for the birth of a new human? An exploration in radical ethics for sustainable architecture.

Andrea Wheeler, Iowa State University

This paper critically examines literature concerned with an ethics in the multiplicity of different approaches to the design of sustainable architecture. Sustainable design theorists commonly argue for the need to perceive the world differently, to find new ways to live, to create new values to replace old: questions of ethics are implicit in such explorations. If sustainable architecture is to go beyond limiting models upholding inherently exploitative relationships to the environment and other living beings, however, sustainable architecture must open its cultural horizon to new ways of thinking and being. While an ecological ethic may be argued to be inclusive, ethical in its concern for the inter-relationship of all organisms to their environments, what is at risk is the need for a social ethic in the human worlds of sustainable design. Architecture needs radically new ethical philosophies to help it reach beyond its existing discourse and in this paper, I explore some of those radical thinkers of environmental and social ethics, their critics and the implication for approaches to sustainable architecture.

## Teaching Almost Natural Things

Faysal Tabbarah, American University of Sharjah

The essay problematizes the teaching about nature in undergraduate architecture education at a time of an increasing environmental crisis. Looking outside of contemporary academia and the discipline's response to this crisis through the lens of ecological ethics, the essay describes a teaching pedagogy that challenges how most contemporary undergraduate architecture education teaches about nature in a way that reinforces the hegemony of the nature/culture binary that seems implausible and irrelevant with the advent of the Anthropocene. The essay describes a teaching pedagogy that is deployed in various curricular forms (Studio, seminar, independent research) that asks students to think about architecture as an Almost Natural condition that rejects traditional geometric hierarchies, linear part-to-whole relationships, pattern making, and precision, in favor of tactical organizations a blurring of part and whole, deep textures, and the painterly or gestural.

## The Eye of the Bricoleur

Gray Read, Florida International University

Who is the architect any more? In the face of environmental crisis, the cries of utopian masters of the universe ring hollow. To engage the larger ecological mission, the architect's ethical responsibility has shifted and broadened, turning focus to larger systemic issues that do not necessarily have people at the center. In this new reality, what models or myths can be cobbled together out of our tradition to construct a new stance for the future? This paper looks at the figure of the bricoleur as constructed by anthropologist Claude Levi-Strauss, the handyman/inventor who can improvise to remake old things to serve new purposes. In Levi-Strauss' telling, the bricoleur stands opposed to the engineer, who imagines an ideal solution to a problem. The bricoleur first studies the

materials and situation at hand, engaging things not as inert objects obedient to a human subject, but as active entities, each with a specific history, character, and inexhaustible potential for the future, either in relation to people, or not. As improviser and inventor the bricoleur is useful in times of crisis. He appears at the very end of Vitruvius's 10 Books of Architecture defending the city from a war machine, just as we now must save ourselves from our own machines. The situated, material intelligence of the bricoleur is called for now to help reimagine ourselves within rather than outside a wounded ecosystem.

## States of Disrepair / Acts of Repair II

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Date: Friday, March 16, 2018

Time: 11:00:00 AM - 12:30:00 PM

Topic Chair: Sabir Khan, Georgia Institute of Technology

### The “Convivial” Home: Resolving Emerging Building Technologies with a Culture of Self-Repair

Allen Pierce

Architectural technologies are expanding in scope and complexity at an astounding rate. Nowhere is this more conspicuous than the single-family home sector where intelligent building systems, advancements in prefabrication and more widespread access to advanced building materials are reshaping construction typologies that have seen relatively little change in over a century. Many private homeowners are faced with mounting costs as they regularly hire outside experts for routine maintenance after a project is complete. In the constant shadow of contract care, homeowners are increasingly divorced from the physical reality of their own dwelling, weakening their bond to place and diminishing their sense of personal investment.

As we arrive at a point in time when a homeowner can no longer repair much of their home with materials and equipment from their corner hardware store, do architects have a duty to design in some other means of control? Should we be building the homes of the future to be as “hackable” as the homes of the past even if it means rejecting some emerging technologies? Are there ways we can make homes today “open source” using the machinery of our age? This paper attempts to address these questions via architectural case studies, ideas from Illich, Aravena, Sennett & Hertzberger, and anecdotes from my own history of practice in the Eastern US.

### Designed for Repair-ability: Learning from the German Country Schools of Gillespie County, Texas

Ben K. Shacklette, Texas Tech University

This paper explores the architectural act of repair as an ethical imperative determined by a set of values, and speculates about what architects can learn from the values of vernacular builders who create and then maintain their buildings for several generations, through community led conservation and repair projects. The subject of this study is the vernacular rural one-room school complexes which are unique to the German settlers in Gillespie County, Texas. The case studies represent a cultural body of regional vernacular building typologies and conservation methods, spanning from 1873 to the present, demonstrating how the builders of the German Schools worked from a set of shared principles. The Texas-German community in Gillespie County developed a local expertise in natural building materials, merged those materials with tested manufactured products, and they learned from their non-German speaking neighbors by interpreting but not copying methods and material uses. This study claims the crafts and skills learned about building and repairing is deeply imbedded in the social structure of the rural German-Texan communities, their

knowledge of modern vernacular building materials has been passed on to future generations as critical information necessary for repair and maintenance, and a shared community purpose can inspire sustainable places through an ethos of “self-build” and “self-repair”.

## Building Down: Disassembling a Company Town

David Karle, University of Nebraska-Lincoln

On October 3, 2016, two decentralized consumer-based retail stores merged when Bass Pro Shops acquired Cabela's for \$5.5 billion. Following the merger, it is unlikely that Bass Pro Shops will elect to retain the Cabela's headquarters or retail store in Sidney, Nebraska, both to avoid maintaining duplicate headquarters and to target more profitable retail locations. As Sidney braces for its uncertain future, the city needs to address the artifacts of corporate, consumer-based urbanism that have resulted from Cabela's presence. Instead of attempting to maintain, service, or repair the artifacts, a more radical solution was considered. One method for combating the inevitable downward spiral resulting from the loss of the Cabela's headquarters, retail store, and distribution center in Sidney would be to adopt new forms, logics, and economies of subtraction. This would soften the transition of the community from its current state to a post-Cabela's condition while mitigating the typical effects of decline seen throughout shrinking communities. A proposed framework for subtraction would embrace decline, allowing the community to shrink or contract in a more gradual and productive way. The proposed subtraction scenarios include sites, strategies, tactics, user-narratives, and a framework. The concluding framework takes into account suspending and evolving economies and flexible systems of organization. The scenarios are meant to bring about awareness as much as to speculate on Sidney's future economic and built environment. Sidney provides an extreme case study of decentralized consumerism with which to apply potential alternatives to the typical pattern of decline.

## Open - Technology

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Date: Friday, March 16, 2018

Time: 11:00:00 AM - 12:30:00 PM

Topic Chair: Justin Miller, Auburn University

### Synphronesis

Michael Barton, University of British Columbia

It is observed that Architects face an increased involvement in the design of systems rather than artefacts. Such processes produce the ethical dilemma of increasing the tendency towards automation. This paper utilizes Bernard Stiegler's reading of the pharmakon to contextualize the challenges facing architecture resulting from increased automation. It further suggests that a potential design solution may be found in autonomous self-organizing systems. The concept of synphronesis is introduced in order to articulate the role of ethics in designing systems of governance. This paper provides a framework for considering what kind of ethical framework might suitably accompany the changes architecture faces in the age of automation.

### Towards Integrating Aesthetic Variables in Architectural Design Optimization

Shermeen Yousif, Texas A&M University

Mark Clayton, Texas A&M University

Wei Yan, Texas A&M University

This work suggests an approach to assure generation of aesthetically pleasing design candidates with high technical performance. By employing an aesthetically-driven initial population as input to an evolutionary algorithm using technically-oriented fitness functions and a filter to assure diversity, the method guides the algorithm toward candidate solutions that are both aesthetically pleasing and technically proficient. The aim is to overcome criticism of design automation systems that accomplish high technical performance but low aesthetic quality. The method involves review of related research, prototyping a software, and testing the prototype with one or more tests. The prototype, under development, first utilizes parametric modeling for form generation. Aesthetic parameters are introduced to generate the initial population in two steps: (1) creating analytical diagrams that expresses aesthetic ideas derived from architectural theory, and (2) generating synthetic models through parameterization of the aesthetic variables. As a test case, the process of analytical diagrams devises aesthetic parameters from the modern language of architecture of Bruno Zevi, applying them to a test-case of Richard Meier's Atheneum. Next, a Multi-Objective Evolutionary Algorithm that employs simulation-based fitness functions to optimize the environmental performance will be incorporated into the workflow. A form diversity algorithm that has been developed in a prior work will be incorporated to ensure that redundant forms are eliminated from the candidate set and condense the candidate list into distinctly different candidates. The workflow can then loop back to another generation in the evolutionary algorithm or terminate with a set of Pareto optimum solutions with high aesthetic performance. This research plan is under implementation.



## Optical Illusions of Volume: Simulation-based form finding and fabrication.

Mara Marcu, University of Cincinnati

Ming Tang, University of Cincinnati

This paper presents alternatives to simulation driven processes which begin to exploit misbehaving behaviors in an ideal file to factory methodology. The work conducted together with students reconciles conflicting attitudes between traditional CAD/CAM strategies, interactive architecture, augmented reality and analog post-processing techniques. The projects mainly employ the use of a lightweight sheet material, parametric design, simulation, responsive architecture and investigate messier and more intuitive assembly strategies. Through this body of work we aim at developing techniques within the digital process that exploit a non-linear design and fabrication approach in which the hand and the machine become increasingly disrespectful of each other's artificially delineated boundary. By contaminating and continually disrupting each other, we believe that what are considered, by norm, flaws or faulty formations within the fabrication process can open up intriguing opportunities in architecture and design, otherwise missed.

## Biotechnology Revolution: How Mushrooms Will Save the World, One Module at a Time.

Angela Bracco, California Polytechnic State University

As resiliency becomes increasingly pertinent in today's conversations about the urban environment and natural ecologies, it becomes even more pressing that the architectural community join forces with the natural sciences in order to have a significant impact on manufacturing, construction, occupation, and post-deconstruction of the built environment. "The nineteenth Century was shaped by the mechanization of the Industrial Revolution; in the twentieth century, the silicon circuitry of an Information Revolution reconstructed modern life. Now, some predict biotechnology will be the foremost driver of change for the twenty-first century." Much like the aforementioned movements, synthetic biologists believe their intentional redesign of biology is integral to a "Biotechnological Revolution." This movement, has the potential to reach across to other industries. Through collaborative endeavors biologists and architects are combining their efforts to manipulate matter in ways that ultimately could change future standards and practices in the design and building industry. Nurturing and cultivating biological carbon-based materials can have a profound influence. One such material that is offering new opportunities in design and building materials is mycelium inoculated substrate; and it has the potential to make a significant impact in changing our current building practices.

## **Ethics, Development and Donald Trump**

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Date: Friday, March 16, 2018

Time: 2:00:00 PM - 3:30:00 PM

Topic Chair: Thomas Fisher, University of Minnesota

### **Politics, Architecture and a Wall**

Ane Gonzalez Lara, University of New Mexico

One might think that when the President of the United States included in his campaign building a great structure, and creating thousands of jobs in the construction industry, that this would be great news for the architects of the country. But when that structure is a wall dividing two neighbor countries, there are more things coming into play than just getting a wall built.

This situation has caused lots of diverse opinions amongst the architects of the country and has challenged the role of architects in the conflict. It has generated competitions around the issue, publications, conferences and lots of diverse points of view.

This paper will analyze the reactions that the wall has created amongst the architecture community and the role of architects in such conflicts.

### **The Crisis of Monumentality: Mies van der Rohe, the Nazi Competitions and Trump's Border Wall**

Andrew Gleeson, Iowa State University

The Donald J. Trump presidency puts into sharp focus ethical dilemmas architects face. In current practice, what informs our decisions to chase or to deny capital based on a moral objection towards a client's or a sovereignties ethics? How does this factor into our existing criteria for accepting or rejecting a proposal? Mies van der Rohe submitted two major competition entries for the Nazis, The Reichsbank in 1933, and a German Pavilion in the Brussels Expo in 1934. These projects interrogate architecture's ability to remain autonomous from the political context in which they are embedded. A close formal examination of these two entries de-conceals many formal indeterminacies. Examining closely the surviving drawings reveals moments of confusion and unresolved simultaneity between the heavy, classicized, monumentality of Nazi propaganda architecture, and Mies' continued allegiance to the modernist project. Ambiguous rhetorical readings of the two projects also destabilize the role politics may have served in the conception of these works. The tone expressed in the non-satirical proposals for Trump's border wall competition brings immediacy to questions of rhetoric in current practice. When faced with a government that uses minorities, the poor and the foreign-born as scapegoats is one expected to reject all commissions from a bigoted administration?

"One must know that this world is formed and that this form matters."  
Ludwig Mies van der Rohe, 1932

## The Unbearable Whiteness of Being: The Racial Production of Architecture and Architects

B.D. Wortham-Galvin, Clemson University

Jackie McFarland, Portland State University

In order to address the ethical challenges that President Donald Trump's administration continues to generate, race needs to be explicated addressed not only in the demographics of architecture schools and firms, but also in acknowledging that architecture in the United States is taught and practiced with racial bias. The problem—identified and made explicit by civil rights activist Whitney Young 50 years ago—cannot be solved through a head count alone because it is also a problem of the presumed neutrality of whiteness and the invisibility of blackness in both the episteme of the American identity and as it blankets the teaching and praxis of architecture in the United States.

Architecture, thus, is political; in spite of the fact that architectural education and practice has been naturalized throughout the 20th and into the 21st century to focus on just the objects—as if the contexts were only physical and not political. Trump is a manifestation of a deeper problem in the United States wherein we render our socio-political contexts neutral. Young pointed this out fifty years ago and yet our response has been anemic. In order to address the continued “complete irrelevance” of architectural education and practice, this paper will: 1). Conceptualize notions of whiteness and blackness and how they operate in the United States; 2). Delineate the architectural implications of whiteness and blackness; and, 3). Begin a discussion of how architectural schools can explicitly address this issue.

## **Ecological Ethics (and the Role of the Architect) II**

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Date: Friday, March 16, 2018

Time: 2:00:00 PM - 3:30:00 PM

Topic Chairs: Michael A. McClure, University of Louisiana-Lafayette

Ursula Emery McClure, Louisiana State University

### **Cradles to Cradles: Designing for Non-Human Loops**

Leonard D. Yui, Roger Williams University

This paper challenges and proposes an alternative to the Cradle to Cradle (C2C) model by seeking a more inclusive ecological perspective on architectural materials. The current model sustains anthropocentric ideals that do not recognize the direct uses and needs of non-human species or processes. The study highlights the origins of C2C through the works of Stahel, Braungart and others, which aims for a perpetual reuse process. In addition, certain ecological processes are favored for their benefit to human productivity. What becomes apparent is a sustainable trajectory that is simplifying the end of life phase in order to hasten production and design for economic gain. A reciprocal investigation to more naturalistic and ecological understandings of wood illustrate the diverse uses of wood, such as a place to nest or to take cover, which slows and expands entropic engagements. The term “deadcycle” is used to underscore entropy and to shift away from a product lifecycle perspective. These ecological insights are drawn from forest researchers studying the science of deadwood, which presents a more contemporary and complex perspective of ecology that brings focus to topics like disequilibrium and disturbance. The ecological concepts of “biological legacy” and “multiple users” reveals a shared world where ownership is fluid and borrowing is essential. These themes help to conceive an ideal ecological loop(s) model presented here as “cradles to cradles.” This proposed model echoes the ethical and ecological imperatives of the original C2C model, while also redirecting the material dialog toward more comprehensive ecological dialogs.

### **Fluid Futures**

Nikole Bouchard, University of Wisconsin-Milwaukee

According to NASA Scientists, the most recent climate change data suggests that sea levels will rise 3' or more within the next 100-200 years. Shanghai, China's largest city, is home to 24 million people. Climate Central estimates show that 76% of Shanghai's populated territory will be swallowed by rising seas if the earth warms by 4°C in the next 95 years. At the same time, today more than a third of the world's population—about 2.7 billion people—live in river basins that experience severe water scarcity for at least one month each year. Global freshwater demand is expected to exceed current supply by more than 40 percent by the year 2030 at which point nearly half of the world's population will be living in high water stress regions. Re-thinking the ways in which we live with and without (clean) water is essential to ensure a more feasible future. Fluid Futures presents three water related setbacks and resilient design responses that span various scales—small, medium and large—and cities—New York, Suzhou and Sendai.

## When Green was the New Black: What Went Wrong with China's Eco-city Movement?

Zhongjie Lin, University of North Carolina at Charlotte

The last decade has seen a widespread enthusiasm in the term “eco-city” or “green city” across China. By 2011, more than 250 cities, or nearly 80% of all municipalities in China, declared their intent to become eco-cities, and more than 100 “eco-new towns” were under construction. The mass eco-city movement, however, has not made commensurate impact on the practice of city building as in most cases the concept remained in a rhetorical fashion to defend conventional approaches to planning and management at the local level. The central government continued to assert its support of sustainable urbanization and created a number of demo eco-new towns, such as Dongtan and Tianjin Eco-cities, but these high-profiled projects also stumbled along. This paper looks at two model projects, analyzing their programs, plans, and key performance indicators to offer constructive criticism of the eco-city movement with Chinese characteristic. Through the case studies, it examines the obstacles in realizing eco-city in China from the perspectives of technical readiness, economic feasibility, land policy, and development pattern.

# On the Advantages and Disadvantages of Instrumentality for Architecture

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Date: Friday, March 16, 2018

Time: 2:00:00 PM - 3:30:00 PM

Topic Chairs: Gary Huafan He, Yale University  
Skender Luarasi, Yale University

## Digital Conformity

Rima Ajlouni, University of Utah

In architectural design, profound changes to the nature of design instrumentations are challenging firmly-held assumptions about the relationship between the design ideation and its representation. For centuries, hand-drawn representations have been used to facilitate the cognitive dialogue; bridging the gap between the internal mental images and the external physical world. Today, architectural discourse is rapidly embracing digital mediums, through which designs are conceived and communicated via controlled digital lenses. While these digital environments offer multitude of creative spheres for exploration, the change from atoms to bits is shaping new ways of thinking and making while forcing a higher degree of imbedded submission to the tool's logic. Unfortunately, the role that digital instrumentations play in conforming our physical, virtual and perceptual realities is rarely at the center of investigation. It is therefore critical to look behind the digital interface and to unmask what is redefining design reasoning patterns within architectural discourse. To contribute to this critical discussion, this paper investigates the operating logic, graphic platforms and geometric principles behind most of the commonly used digital software in architecture today. This survey shows that the overwhelming majority of digital tools utilize the same programming and graphical platforms, which raises critical questions about the level of imbedded conformity. Most critically, the geometric concepts used in shaping the contemporary language of architecture are chiefly derived by the abilities and limitations of the software itself and rarely substantiated by architectural theory or intellectual discourse, in which the human consideration is largely missing.

## Constructed Invisibles: Designing Instruments As and For Effects

Catty Dan Zhang, University of North Carolina at Charlotte

Gabriele d' Annunzio described the "richest events occur in us long before the soul perceives them", and "when we begin to open our eyes to the visible, we have long since committed ourselves to the invisible". While unmediated human eye perceives the built environment from the visible forms, this paper discusses instruments and instrumentality through the development of a research project "Constructed Invisibles", which intends to build towards a volumetric perception of the environment with the awareness of the "void" in between. This project experiments ways of perceptually measuring the interaction between human behavior and unperceivable air movements; and explores in depth methods and techniques of designing with this invisible medium. Through tracking precedents in creating forms with airflow from principles of natural physics, this project seeks precision in articulating the invisible forms and patterns interactively following the

geometric language. Points, lines, curves, surfaces, volumes and textures are generated through temperature and motion as agent.

“Constructed Invisibles” examines the medium, materiality, geometry and texture of airflow as material. It consists of a series of experimental devices with various strategies of utilizing thermal- and aerodynamics. Operations on the duration, interval, and electric current in controlling the thermal components, as well as on the speed, direction, and sequencing to manipulate the movements, allow invisible forms of the airflow being created, sensed, and choreographed. This project presents the integration of multiple systems, fabrication processes, optical experiments and computational analysis and design. It bears questions derived from processes and outcomes of the architectural and technological investigation on efficiency, effect, pragmatism, as well as on environmental aesthetics— with the potential of the invisible materials informing the design of the “visible”.

## Google Campus One, Driverless Vehicles, and the Ethics of Systems Spaces

Michael Barton, University of British Columbia

This paper explores some of the challenges to architectural praxis introduced by the increasing presence of digital technology innovators entering the building sector. These new influences bring new goals and value systems that change what is at stake in designing the built environment. The increasing computerization of architectural process and the integration of digital systems into buildings leads to the overlay of ethical frameworks upon buildings and cities. These value systems are sometimes inherent components of a program's intended function, but they are also sometimes side effects of the design of the underlying systems. With reference to Google this paper investigates how some of the innovative company's inventions, particularly dynamic building design and driverless vehicles, have produced various ethical imperatives that impinge on notions of public and private space making. In conclusion, the paper speculates on the role Architects can and do play in mediating the challenges induced by the contemporary technological advancement of space making.

## The Architect's Essential Instruments: Implications of Affordance Theory for Construction Documentation

Luc Phinney, Virginia Tech

To date, architecture has avoided the much of the cognitive turn of other disciplines. We may one day talk about ‘cognitive architecture’ or ‘cognitive architectonics’; but that day has not yet come. Theorists and some practitioners draw heavily upon the insights of phenomenologists like Martin Heidegger and Maurice Merleau-Ponty, but fewer of them explore the psychological research that influenced those philosophers, and which has continued to evolve since. What use after all is soft science to those who build hard things? Architecture concerns itself with instrumental ends. This is both a challenge and a relief: “Go out and build something.” But architects seldom have the hammer physically in hand, or handle the bricks. This can lead to a crisis of confidence. Some architects (famously) overcome this crisis by taking the brick in hand (even, like Hamlet, discoursing with it). Others withdraw from the gritty reality of materials and

methods, fomenting figments of fog or fantastically supported glass. But this is not the architect's role. Neither fantasist nor craftsman (however much we may long for the freedom or certainty of those occupations), the architect has, already, a set of tools. But what is their nature? One particular concept pervasive in social psychology, J. J. Gibson's theory of affordances, may help us get a handle on the dubious instrumentality of our instruments. A historical example of a building and its tools, constructed by an archaeologist-of-tools, will serve as a primary source for this question of the architect's essential instruments.



## **Architecture of the other 99%? Power, Economy, and the Dilemma of History**

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Date: Saturday, March 17, 2018

Time: 9:00:00 AM - 10:30:00 PM

Topic Chair: Ole W. Fischer, University of Utah

### **Architectural Violence and Architectural Power: The Fall of Postmodernism and the New Empowerment**

Jeffrey Mansfield, MASS Design Group

Michael Murphy, MASS Design Group

Violence has come to define and accelerate our architectural epochs. In the erection, abandonment, or destruction of architecture, buildings reveal shifts in economic and political power. Violence accompanies these shifts, fear reveals cracks in theory and discipline, and new architectural paradigms emerge. Haussmann and the Second Empire style of Paris, the World Wars and modernism, as well as urban renewal and late (brutalist) modernism all represent shifts in the social order made manifest through buildings. Architectural styles and theory follow, and the power of architecture—its very agency in contributing to the social change it accompanies—is resized within the parameters of each political epoch.

However, the types of violence that follow these shifts are not well defined. When Charles Jencks and others called for the end of modernism, it was during a reflective moment about the ethics and accountability of architects, resulting in a theoretical distancing from the social mission of modernism born out of a disciplinary hangover over its failed social projects. Yet, close scrutiny of the theoretical work of postmodernism reveals a misunderstanding of what violence architects are responsible for, and what we have conflated as outside our purview.

In a close reading of Bernard Tschumi's "Violence of Architecture," five orders of architectural violence surface, highlighting the postmodern rejection of architects' complicity in direct, programmatic, stylistic, and systemic violence. The fruits of this theoretical labor—the fifth order, metaphysical violence—represents postmodernism's inward turn, finding architectural agency in the subconscious and the experiential. Violence becomes a metaphor.

But in absolving architects of social accountability, the postmodern project exerted what may be its greatest injury, a type of disciplinary violence that abstracts buildings from their impacts on people. A review of architecture's relationship to violence through Pruitt-Igoe, the work of Albert Speer, and recent socially driven projects reveal new opportunities and threats for our discipline to define agency and empowerment.

## Behind the Sealed-up Doors: The New Urban Renewal Movement in Beijing

Wei Zhao, University of Utah

Based on a case study in Beijing, China, this paper examines the ways in which architecture reflects the charged relationship among power, economy and social relations within a society. Starting in April 2017, the Beijing municipal government enacted a new, three-year urban renewal policy that aims to restore and improve the built environment of the 2,435 alleyways in the historic center of the city. The local implementation, however, has focused on sealing doors and windows that have led to homes and small businesses for decades. As a result, thousands of businesses that had been providing daily services to local residents closed down, forcing many people to move to other cities. Drawing on archival research and limited interviews, this paper examines the characteristics of the existing urban fabric of the historic center of Beijing and analyzes the social context and execution process of the urban renewal policy. This paper argues that the Beijing municipal government uses the architecture of the 99 percent as a tool not only to eliminate non-permanent residents by decimating their places to work and live, but also to control social activities and residents' relations through reconstructing place at the local level. As a result, by taking over the ownership of the architecture of the 99 percent, the Beijing municipal government aims to create a new image of the capital of China as defined by the new master plan, a plan which is not only ahistorical, but also promulgates the ideas of regularity, singularity and segregation.

## Resistance Through Form: Masonry Synthesis Structures in the Design of a New Residential Architecture for Khartoum, Sudan

Mohamed Ismail, Massachusetts Institute of Technology

With one of the highest urbanization rates in Africa, at 4.3%, per annum, nearly half of Sudan lives in its cities. Two-thirds of that urban population lives in slums or otherwise informal settlements, and current construction practices and housing policies cannot meet growing housing needs.

There is an opportunity for architecture that responds to the housing needs and material availability while reflecting local housing traditions. Synthesis structures are structures informed by their material understanding, their process of construction, and inform their interior space and texture (Corrao and Pastre). This includes traditional compressive forms like the arch, vault, and dome, and more. The raw materials and the labor needed for masonry are plentiful in Sudan, especially in Khartoum at the clay-rich riverbeds of the Niles (Alam).

Unfortunately, earthen construction suffers the stigmas of poverty, structural insufficiency, and deficient technical knowledge (Osmani and Hadjri). Masonry synthesis structures may potentially overcome the perceived cultural and performative limitations of earthen construction. Worldwide, there are ongoing efforts to reimagine the possibilities of earth-based construction in cities. This is not a new phenomenon; in *Architecture for the Poor*, Hassan Fathy explored the use of mudbrick beginning in the 1930s (Fathy). Fathy referenced traditional and vernacular architecture to inform the contemporary design of rural housing.

Today, architects are learning from centuries of vernacular architecture while pushing traditional material use further than ever before. This research identifies potential new applications of masonry synthesis structures in the design of a new urban residential architecture in Khartoum, Sudan.

## **Ecological Ethics (and the Role of the Architect) III**

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Date: Saturday, March 17, 2018

Time: 9:00:00 AM - 10:30:00 AM

Topic Chairs: Michael A. McClure, University of Louisiana-Lafayette

Ursula Emery McClure, Louisiana State University

### **Algorithmic Ecologies: Integrating Dynamics and Real-time Simulation Feedback for Design Optimization**

Kelly Winn, Rensselaer Polytechnic Institute

To meet and respond to future challenges posed by large scale climate crises before they occur, it is necessary to begin addressing the adverse effects of the built environment by developing biological buffers or designing new systems to restore, replenish, and remediate ecological systems. Designers must pursue innovative methods to model, analyze, simulate, and optimize these systems, in order to design architecture and landscape systems that respond effectively to complex ecological problems occurring over significant temporal and geographic scales. As a result, data driven design is required to balance competing design criteria effectively through trade-offs to meet design objectives of high-performance architectural systems and is increasingly a requirement of design practice for the foreseeable future. This type of advanced computational design requires sophisticated models to be developed integrating these complicated tools in the design process for simulation and dynamic modeling. This type of advanced computation requires making use of readily available datasets defining weather profiles, material properties, energy performance, building physics, etc. that can all be used to inform the design process and test the suitability of design solutions. In this paper, a process for integrating multi-objective genetic algorithms (MOGA) for design optimization driving parametric models and environmental simulation is discussed. Three student case studies from a two-semester course sequence focusing on ecology-centric design schemes are presented, demonstrating the design optimization of sufficiently complex parametric models. These case studies will be used to demonstrate the potential for such methods to be incorporated in different aspects of the conceptual design process and architectural course curriculum.

### **Net Zero is Not a Choice but an Ethical Practice – Evolution of Net Zero Building**

Ming Hu, University of Maryland

Buildings are responsible for approximately one-third of worldwide carbon emissions and account for over 40 percent of primary energy consumption globally. High-performance building design has become an overarching goal for the building and construction industry. The important and trendy domains in the built environment are the “resilience” and “net zero” associated with high-performance design that have their origin in ecology. The performance of building and energy efficiency is one of the common measuring indexes accepted by multiple fields. The ultimate goal of a net zero building has become a hot trend, and an off-grid building has become the ultimate “high-performance” standard. The fundamental misleading concept around contemporary net zero buildings is

that a net zero building is one type of building, one type of design process. Instead, if we trace the origin of net zero energy back to its ecological root, we should consider net zero building as a guiding design principle for all buildings and a professional ethic for all practitioners. Just as all mechanical design has to follow the laws of thermodynamics, all building design should keep the net zero concept as the core consideration, not an add-on item. This paper first outlines and explains the ecology origin of the net zero concept and then provides a comprehensive overview of the net zero movement from the 1930s to present time. Five critical development periods are identified, and major events, developments, and influential thinkers are described and explained. Based on the comprehensive review, two major divergences of the net zero movement in the building industry from its ecological origin are noted.

## The Avian Ethics of Facades: Considering wildlife constituencies in architectural design

Scott Murray, University of Illinois, Urbana-Champaign

Collisions with building facades result in the deaths of hundreds of millions of birds annually in the United States. The ways in which building facades are designed can have direct impact on this tragic number, either positively or negatively. This paper argues that our conception of architectural ethics must be expanded to address buildings' impact on wildlife constituencies, taking the building envelope and its effects on birds as a primary test case. The effective integration of bird-safe approaches to facade design require the architect to possess, in equal measures, ecological and technological literacy. An understanding of the migration patterns and behavior of birds must be paired with detailed knowledge about glass properties and fabrication possibilities. Ultimately, as the paper explains, this approach requires us to form an expanded concept of subjectivity and site in architecture.

## **History and Theory as Methods of Ethical Engagement?**

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Date: Saturday, March 17, 2018

Time: 09:00:00 AM - 10:30:00 AM

Topic Chairs: Anna Gloria Goodman, Portland State University  
Sharone Tomer, Virginia Tech

### **Decolonizing Architectural Pedagogy**

Shundana Yusaf, University of Utah

This paper takes a look at how undergraduate survey of global history and theory of architecture can provide an ethical framework for architectural education across the world and the challenges faced by historians teaching in schools of architecture. It argues that while our pedagogy has made great strides in environmental consciences, community engagement, including minority voices, architecture as a discipline remains a 19th century, affluent Eurocentric and male discipline. Its structure remains uncomfortably close to colonial mentality where architects become knowing or (worse) unknowing proselytizers of capitalist modernity. To give future architects the tools to be more meaningful members in a highly interconnected and yet tragically disconnected world, the burden of ethical engagement must be shared by the entire curriculum, not just the history and theory courses.

### **The New Global: Architectural History Education and the Ethics of Millennial Citizenship**

Eliana AbuHamdi Murchie, Massachusetts Institute of Technology

Today's architecture students will design in a world characterized by continual technological innovation and increased connectivity, ecological hazards and extreme social inequality, none of which can be addressed by traditional approaches to the canon of architectural education. These concerns must be met with a new approach to architectural curriculum, a new canon, and a new beginning place, toward a new global. What is the established Global, and what is the new Global? Architectural history has been a Euro-centric discipline, which treated the architecture of the non-West as a separate category, as "vernacular." When pushed to "globalize," architectural survey courses simply aimed focus on the regions of study deemed "excluded" by preceding methods. However, this is not truly a new Global approach, as it still focuses exclusively on architecture as the object of study, but now in non-western territories. Such a conceptualization too easily defaults into categories of non-west and vernacular. Rather, new Global would engage in interdisciplinary debates that consider histories beyond the architectural object, and that find a way to de-emphasize regions and instead emphasize connections.

Indeed, the Global Architectural History Teaching Collaborative (GAHTC) was established on this very premise; the emphasis on connections, eschewing the dominant reaction to include areas previously excluded. As coordinator of the GAHTC, I work to further establish the understanding that we ought not to focus

on these cases of exclusion, as we do not regard such a category as reason enough to enter the discourse of the new Global Architectural History. Rather we study, research, and include regions, cultures, religions, practices, etc., of history that are essential to the debate of a true, and new, Global Architectural discourse of learning.

Architectural history must thus expand with intention, not simply as a generic inclusion of previously unstudied or “excluded” territories. Rather, when expanding new architectural education, we must ask the complex question of: toward what end? In other words, what is the purpose of architectural education, and what are the essential competencies we hope to instill? In the context of shifting social needs and administrative paradigms, such questions about the ends of architectural education urge us to reconsider its beginnings, and in particular question the extent to which current curricular practices prepare architecture students to effectively (and ethically) participate in contemporary, millennial society.

This paper will present the importance of a new Global, one based in an ethical responsibility, and a discursive approach to architectural history that has an intellectual longevity, able to withstand first, a necessary and critical separation of operative knowledge from historical knowledge, and second, transcend beyond the cursory minimum as set by the National Architecture Accrediting Board. This paper will present the work of the Global Architectural Teaching Collaborative, a unique and international group of scholars who have come together, to produce innovative and timely teaching material, working toward a new beginning, and a new Global.

## Organic Intelligence: walking, living, and attuning systems

Nathaniel Stern, University of Wisconsin-Milwaukee

With his ongoing "City Walks" and "Creative City Initiatives," South African architect-turned-artist and -city planner Doung Anwar Jahangeer asks, How might we, as individuals and groups, orient ourselves towards, and implement, more vulnerable, tactical, and tactful ethics and aesthetics in how we design and engage with the city?

In Durban, the third largest city in the Republic, this Mauritian-born activist's failed attempt at suicide resulted in a new life of walking and talking, teaching and learning, between his habitat and communities. Vulnerability: an openness to power, beliefs, agencies, languages, meanings, relationships, or struggles outside our standard spheres of movement; such an openness can of course lead to damage, but it might also lead to wonder, creation, or love (Bakhtin, McKay, Garvey, Brown). In the face of what felt like overwhelming powerlessness, Jahangeer began moving around, and listening and attuning to, the potentials of life outside the limits he and his habitat had constructed to that point.

Often directly referencing Michel de Certeau's "Walking in the City" (1984), Jahangeer now takes interested parties on long walks around "Zululand," and his politically-charged but always generous designs are literally an experience and

practice of movement, a relation to others and their/our environments, built and otherwise. Walking any given city, he says, is always an intervention into the meta-narratives generated by the strategies and structures of governments, corporations, and other institutional bodies. During Apartheid, walking and various other forms of transit were highly regulated, and chance encounters between real and vulnerable people of different skin colors were obstructed. This was safer, better, more efficient, South Africans were told. And now in post-Apartheid South Africa, there are fewer laws, but no less explicit rules, around who belongs where, and when, and to what purpose. Jahangeer believes it is part of his job as an artist, architect, and activist to subvert such dominant paradigms of power, among them the legacies of Apartheid - just as it was his job to subvert Apartheid itself in past decades. Here dominant paradigms go beyond values, or systems of thought; they are not only shaped by a community's cultural background and the context of the historical moment, but also by current physical spaces and architectures - both natural and constructed - and how we move through them.

Jahangeer urban planning and development projects similarly "aspire to the passionate and compassionate art of city making" in how they employ imagination and wonder. His team focuses on "a sustainable approach to civic creativity." He asks, How can we be more organically intelligent, and intelligently organic?

In this paper, I will discuss what Jahangeer calls "organic intelligence": the emergent and relational ecologies of cities, landscapes, buildings, society, and nature, which might pose new and different ethical questions after the forms of capitalism, and climate change, that have dominated the last 30 years. I will tell Jahangeer's core story, alongside his own practices of storytelling, vulnerability, ethics, aesthetics, and ecology, and how each affects and is affected by the others.

## Words in Place; Critical Architectural Messages on the Surface of the City

Angeliki Sioli, Louisiana State University

Engaging the course "Critical Analysis and its Context" and the project "Words in Place" this paper examine an alternative approach for the teaching of architectural theory in the context of the Mexican city of Puebla, where I taught architectural theory as a Visiting Professor in the School of Architecture, TEC de Monterrey, Campus Puebla, in 2015-2016. Interested in posing questions related to the specific Mexican context and guiding the students develop their own ethical perspective on it, I organized the course around seminal philosophical essays from both Mexican and International thinkers. The selected works focused on the importance of place for architecture, the value of identity and culture for the built environment, the sociopolitical conditions that influence the development of our cities, etc. They were meant to provoke the students turn their attention to their everyday urban and architectural environment and see it anew, recognizing the ethical responsibility they share for it as future architects. Related weekly assignments allowed them to grasp and further study the



particular concepts through real life situations grafted upon the given urban context.

After these initial experimentations the six-weeks project “Words in Place” was introduced. The students were requested to develop a clear architectural critical message about an urban or architectural issue of Puebla choosing a surface in the city to write it on, and developing an installation that would allow this city-scale writing to be realized. The criticism had to be creatively combined with an original way of writing and a proper place for writing it and the students had to design and create it in a 1:1 scale. In doing so they were forced to address their message to a wider audience and share their position on the topic with the people in the city, face the reactions, engage in conversations and act in some cases like “architectural activists.”

Offering a short description of the particular Mexican context, a more detailed presentation of the syllabus and the short assignment the paper will unpack in detail the “Words in Place” project. It will elaborate on the implications of such an approach for the teaching of architectural theory as a way to cultivate ethical response and it will also present chosen students’ work that best exemplify the pedagogical objectives and the opportunities that such an educational approach opens up.

## Open - History/Theory

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Date: Saturday, March 17, 2018

Time: 11:00:00 AM - 12:30:00 PM

Topic Chair: Leslie K. Van Duzer, University of British Columbia

### Owners & Builders, Their Umpires & Agents

George B. Johnston, Georgia Institute of Technology

The logic of design and building practice in this country can be best understood in terms of gradual shifts in the political economy of construction which issued from colonial times and outward into an advancing frontier. Over three centuries of settlement, pioneers and ostensibly self-sufficient settlers became a symbiotic society, both widely dispersed across the landscape and tightly concentrated in cities. They were comprised of property owners unable to simply build for themselves; and of crafts people building for others, whether for trade or through involuntary servitude, plying their skill in wood, brick, iron, and stone. The notion of an architect could issue from either side of that equation, but each formulation carried embedded relations of class and power, ones we still grapple with today. This paper examines the historical emergence of the idea of the American architect at the contractual intersection of builders' means and owners' ends.

### Ethics, Memory, Architecture (Memory-Works)

Julian Bonder, Roger Williams University

Few words have been so ubiquitous in contemporary culture as the word "memory." Since the 1980s the--perhaps obsessive-- pursuit of memory has become omnipresent. Memory, in its many forms, has become a key marker in such diverse fields as historiography, psychoanalysis, politics, visual and performative arts, information technology, and the media. It also has impacted landscapes, architectures, public art and public space.

Even though monuments and memorials have been built around the globe for many centuries, the atrocities, crimes and disasters of the recent past have been self-consciously inscribed into our build environment as never before in history. Few cities in Europe, South America or the United States do without public spaces dedicated to some such commemoration, and the nearly instinctual response of public authorities, and communities, to public debates on such diverse issues as the "desaparecidos," the holocaust, recent wars, civil rights and slavery is to erect some kind of physical marker of that perhaps uncomfortable history. As a result, architects and artists suddenly find themselves playing an important role in public discourses about history and memory. While we, as architects (and artists), imagine projects and embark on journeys that leave traces over the skin of the earth, our work often lies in unveiling, unearthing, uncovering as well as anchoring histories and memories in and onto territories, sites and cities. The architect's historical role has been to create a theater for actions and of memory capable of embodying truths that make it possible to affirm life and contemplate a better future. It is in the face of catastrophes, historic traumas, and human injustices that the architect's and artist's public roles becomes increasingly complex, problematic but (we hope) also necessary.

So, how do we understand the critical significance of design, art, architecture and action in the public sphere upon conceiving and creating memorial spaces and democratic public spaces? How can we contribute to elaborate the ethical implications of Hannah Arendt's description of the public sphere as "the space of appearance," in the widest sense of the word? How do we position ourselves as architects, artists, teachers, and students, when working on such projects?

## Architecture and the Place of Difficult Memory: Documentation Center Nazi Party Rally Grounds National Socialist Party Rally Grounds in Nuremberg, Germany

Rumiko Handa, University of Nebraska-Lincoln

How can architectural design assist in making the past present in meaningful ways when applied to pre-existing buildings that carry particularly notable and troubling pasts? The paper focuses on the Documentation Center housed in the former Congress Hall on Nazi Party Rally Grounds in Nuremberg, Germany, for which Austrian architect Günther Domenig won an invitational competition in 1998. On-site analysis and archival study reveal memory-inducing mechanisms of designation, formal characteristics, physical trace, and memento.

## Neither Form Nor Place: The Case for Space I

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Date: Saturday, March 17, 2018

Time: 11:00:00 AM - 12:30:00 PM

Topic Chair: Thomas Forget, University of North Carolina at Charlotte

### The Body of Architecture and its Images

Eva Perez de Vega, Pratt Institute

The technical reproduction of images has eviscerated something fundamentally corporeal to the appreciation of artwork and of the architectural space that contains it. Prior to its reproducibility, the experiencing of artwork required a full body commitment, even when the artwork itself was two-dimensional, the experience was a three dimensional one. It always required physical presence and bodily engagement; whether it was walking towards it, around it or looking up to get a better view. One would have to engage with the kinesthetic capacity of our body to appreciate the work or get a full picture of the meanings and techniques behind the images. In the cases when artwork was integrated in the built spaces, such as that of frescos and plastered paintings, conditions for viewing may not have been optimal. As such, it also demanded the engagement of senses other than the visual: the sense of smell and tactility provided by the architecture that housed it, as well our sense of balance and orientation, all contributing to the experience of the artwork images.

There was also an increased awareness of the architectural space that housed the artwork, given how integral the artwork was to the space that supported it, and thus to the experience of the appreciation and communicative capacity of the artwork itself. The experience of artwork that could not be reproduced was by its very irreproducibility demanding of the viewer a commitment to engage with it using all our senses, not only the visual register. Given its bodily dimension, the artwork was essentially understood as three-dimensional, because that was the only way to experience it; with the body, with motion. Even the artwork of frescos that was itself two-dimensional wasn't ever really experienced as two-dimensional because it was always intimately tied to the architectural space that housed it and by the bodily movement needed to appreciate it. Artwork became disassociated with its physical architectural space once it could be reproduced and exhibited elsewhere, or seen in a book or a screen.

This paper aims to be an inquiry into the character of the architectural space that makes viewing artwork possible. The shift in viewing modes, in the spectator, and in the space, will be explored by zooming into three moments in history with a punctual glance into the changing conception of images, and our relationship to them and the space that contains them.

## Architectural Practice in the Context of Post-criticality: Spatial Thinking from City and Behavior of Atelier Bow-wow

Jianfei Yang, Tongji University

Chen Qian, Tongji University

The theory and architecture practice of Atelier Bow-wow foreground social engagement and strive to extract spatial concepts from city and human behavior. They discovered problems that disciplinary autonomy and formal manipulation cannot solve, and concluded spatial prototypes. The article reveals the urban and spatial research of Atelier Bow-wow, and analyzed their 3 project. The spatial concepts of the 3 projects are all started with urban environment and human behavior, instead of form. The research and design projects can help us to think deeply on how architects to transcend form, to discover spatial possibilities outside architecture discipline.

## “WALL” defining the Chinese traditional introverted Space under the Influence of Chinese Ethics

Man Shan, Tongji University

China has been understood as a land operated by walls since ancient times. During the traditional times, the settlement is made of courtyard buildings enclosed by walls completely. As the present age, the city has been arrayed by gated communities. They are enclosed by walls just like the way of ancient courtyard units. We believe the introverted space conception is continuing. As a result, there is a need to make qualitative research using socio-spatial patterns on how the walls define Chinese traditional space and the ethics reasons behind this.

We explore relations between “wall” and distinctive practices predicated on social structures. Informed by social space theory and morphology, empirical research using qualitative methods pairs with secondary and historical data in a study of “wall” in Chinese traditional space. Socio-spatial meanings are explored through the analysis. This paper selects four patterns which are “wall” and buildings, “wall” and sequence, “wall” and view, “wall” and streets to represent how the “wall” as a device with particular roles defines Chinese ancient introverted space of specific social structures and values. We also explored the social structures and values reasons behind each pattern. As a result, “wall” is the most important way to define the introverted space even the introverted society of China. Through the analysis of walls, the paper draws some preliminary conclusions regarding the distinctly Chinese approach to the wall and the linked traditional social ethics reasons with an eye to the understanding of contemporary closed cities of China.

## Architectural Volition, or What Does Form Mean?

Hans Morgenthaler, University of Colorado Denver

Contemporary architecture has distinct symbolic properties, which are not conventional stylistic attributes, but consist uniquely of forms. They are made of the characteristic Modern planes, which indicate spaces. They do not represent space directly, but via a synthesizing understanding that assumes architecture is constituted like “human” life. During Modernism, Alois Riegl established empathy as the mental capacity capable to construct a spatial view from such designs. This should be considered both the root of Modern form and design, as well as, a passage to their meaning. This method sees style as a social, not a material, construct.

Art historians have continued to elaborate Riegl’s method. Among this research are many attempts to specify what *Kunstwollen*, the main term used by Riegl, means today, mainly by screening this term through the lenses of many humanistic, as well as, social and natural scientific methodologies. Art historians have mainly attempted to shed light on this concept by applying it to the new art forms and media created after the 1960s. Major contributions include that viewing and understanding art is part of epistemology. Beauty, i.e., is no longer based on the human form. Art inserts itself into the living world and begins to cleanse humanity, which was the utopian goal of Modernity.

This paper attempts to propose how this more complex methodology can be used to explain contemporary architecture. The major contribution of late-20th-century architecture is its connection of language communications to architectural space in a biological manner. The designs of Zaha Hadid will be analyzed using this updated method. Most interpretations of her buildings focus on the spatial quality of her interiors and try to find contextual clues to explain the exterior shapes. This paper will propose a more scientific reading achieved by emphasizing the bodily and psychological contributions to an empathetic understanding.

## **Disciplinary Hybrids: Landscape as Architecture. Architecture as Landscape. And the Problem is....:**

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Date: Saturday, March 17, 2018

Time: 11:00:00 AM - 12:30:00 PM

Topic Chairs: Dragana Zoric, Pratt Institute  
Evan Tribus, Pratt Institute

### **Past, Present, Future: The Landscape as Design Collaborator**

Gabriel Kaprielian, Temple University

The contemporary practice of designing the built environment is dominated by a top-down approach that imposes rules and boundaries from above, favoring grid-based geometries and hard edges, regardless of the latent potential in the landscape. By not working with the place-specific landscape in the design process, we have been altering the environment in uniformed ways that have led to generic urban form, ecological degradation, and cities that lack resilience and adaptability in the face of growing threats from climate change. We are unlikely to fix the problems of cities by using the same toolbox that got us there in the first place. It is time to define a new approach that begins with a knowledge of the landscape past, present, and future. This will be of particular importance at the edge of cities that mitigate the relationship between the “built” and “natural,” especially coastal communities that are threatened by inundation from sea-level rise and storm events. By utilizing techniques in site analysis as a design driver, I propose that we reflect on past landscape conditions, urban transformations, and a layering of present environmental conditions to inform speculative future scenarios that lead to new relationships between urbanism and ecology.

### **Ceci n'est pas une île.**

Sébastien Roy

The great wall of sand is a project of land reclamation undertaken by the Government of the People's Republic of China since late 2013 in South China Sea. The intention is to strengthen the territorial claims in a highly contested area involving China, Malaysia, the Philippines, Taiwan, and Vietnam. They consist of seven highly militarized man-made island part of the Spratly Archipelago. Between reality and fiction, between landscape and war machines, these man-made islands questions the dialectic between architecture and the landscape, between representation and reality, between the map and the territory.

### **Architecture ≠ Landscape: The Case Against Hybridization**

Zachary Tate Porter, University of Southern California

While there is growing interest in hybridizing the disciplines of architecture and landscape architecture, this essay argues against such an endeavor. Beyond the numerous ideological and logistical obstacles posed by hybridization, this essay contends that the distinction between architecture and landscape architecture plays a critical role within the political structure of the contemporary city. More specifically, it is argued that such a disciplinary division is necessary in order to maintain the legibility of public and private space. Through a series of examples

and case studies, the essay outlines two opposing conceptions of ground—continuous and discrete—as well as their respective socio-political implications within contemporary urbanism. Ultimately, the paper argues for discrete approaches to ground, which allow architects to retain a critical position relative to the city as a whole.

## From Garden Design Approach to Spatial Configuration: The Development of the Architektonische Garten Concept

Liyang Ding, University of Pennsylvania

Despite the recent studies dedicated to discussing the architektonische garten concept, its relative architects, and building manifestations, the architektonische garten or gartenarchitektonische architecture discourse has not been given its justice due to the lack of a critical account of its definition and development. Presented as an observation of its historical transformation from a garden design approach to a spatial configuration model, this article embodies as a preliminary effort to reinterpret the history of the architektonische garten concept by focusing on a relationship between the domestic living and its surrounding topography, which underlies the legacy of this important concept in the early history of modern architecture. Starting from offering a long-overdue definition of the architektonische garten concept initiated by Hermann Muthesius, this paper places this concept among the set of configuration models that characterize the spatial construct of early-20th-century modern architecture. Rather than “experiential” and “flowing,” which were coined by many early modern architects and critics as they respectively describe related spatial concepts, the central feature of the architektonische garten idea is “circumstantial” or “situational.” My claim is that the architektonische garten concept was the most effective—and possibly the only—solution, by virtue of our spatial perception of depth, capable of reconciling the tension between a building’s living content and its surrounding topography.

## Urban Ecology as Model and Method: Collaboration and Multidisciplinary Work

Stephanie Carlisle, Kieran Timberlake

Nicholas Pevzner, University of Pennsylvania

Despite two decades of landscape urbanism theory suggesting the possibility of a shared project and a new hybrid discipline, the fields of landscape and architecture retain distinct pedagogies and practices. Many architects and landscape architects aspire to design within an expanded field of practice, but there is still quite a lot that architects and landscape architects misunderstand about each other’s methods, techniques, and intellectual projects. Among these divisions, an over-reliance on objects has resulted in an underemphasis on systems, interactions, and context. Outdated conceptions of “nature” have limited both disciplines’ agency to operate on socio-ecological designed landscapes. A shift in emphasis from objects to systems, and from pattern to function, may enable these disciplines to pursue a more functional design collaboration. Complex challenges facing tomorrow’s cities will require the expertise of both architecture and landscape. Rather than merging into a hybrid discipline, architecture and landscape each have unique skills, modes and methods to offer.



The real challenge is finding synthetic and radical forms of collaboration. The emerging field of urban ecology offers insights into how disparate disciplines may productively collaborate on a shared project of exploration and intervention without losing their disciplinary core, culture, methods, or perspective. With the urban environment increasingly recognized as a complex ecosystem of socio-ecological-technological relationships, urban ecology also offers new vocabulary and methodology for collaborative and interdisciplinary work on urban sites, with goals like ecological function, high performance, and ongoing long-term design engagement.

## **Neither Form Nor Place: The Case for Space II**

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Date: Saturday, March 17, 2018

Time: 2:30:00 PM - 4:00:00 PM

Topic Chair: Thomas Forget, University of North Carolina at Charlotte

### **Gregory Ain's Mar Vista Housing and the Enactment of the Public Sphere**

Gustavo Leclerc, University of North Carolina at Charlotte

The architectural design and neighborhood layout of the Mid-Twentieth Century Mar Vista tract homes by Gregory Ain coalesce with contemporary preservation efforts today to create a complex dynamic between groups of residents, the neighborhood as a whole, and the city of Los Angeles. As one of the first post war housing developments to receive the designation of Historic Preservation Overlay Zone (HPOZ) , this neighborhood presents a unique set of challenges for the application of preservation principles, bringing to light questions regarding the appropriateness of enforced aesthetic principles within modernist tract neighborhoods. Utilizing Jurgen Habermas' theoretical framework of the public sphere, this paper will analyze primary and secondary data sources to consider the quality and nature of public life in this neighborhood, with particular attention to the influences of the architectural design and the current HPOZ governance process on the enactment of a public sphere.

### **Colonial and Anti-Colonial Design Methodologies: The Instrumentalization of Grids in the Public Interest**

Theodore R. Sawruk, University of Hartford

Timothy Applebee, University of Hartford

In 2016, a Canadian landscape architect, Pierre Belanger, unveiled Extraction, a site-specific intervention at the Venice Architecture Biennale. Belanger's installation drew attention to the use of the grid by the British Empire to assert sovereignty over the full expanse of British North America (i.e. Canada) by implementing the Dominion Land Survey (1871-1930). For Belanger's Extraction, this sovereign act, specifically the act of placing a surveyor's monument to demarcate dominion, became a means for him to controversially highlight 800 years of geological and human exploitation by the Crown. . When used as a means of spatial organization, the grid supported the imposition of political and economic agendas by Colonial Europeans on the indigenous landscape and inhabitants. Civilizations and their architects, however, have utilized the grid for thousands of years. Its place as an integral tool in the design of spatial organizations and structural systems is unchallenged. This paper utilizes a review of architectural and spatial design methodology to understand the theoretical context of Belanger's realized proposal and concludes with an appraisal of the advance of geo-spatial grid mapping and its counter valent potential for design professionals.

## Drawn To Scale: Mapping Operations in Racialized Landscapes

James C. Forren, Dalhousie University

Emily Wilson, Dalhousie University

Sibo Qin, Harbin University

This paper traces mapping activities for a small museum of African-Nova Scotian heritage. Drawing from James Corner's taxonomy of mapping operations, the project leverages form and composition in mapping practice for design generation in racialized landscapes. This analysis frames an understanding of the capacity of mapping operations to assist agency in civic discourse through its construction of visibility and spatial-temporal connection. This capacity informs the project's mapping activities: projective acts which simultaneously prefigure design interventions for an interpretive landscape while serving as instruments for community discourse, visibility, and engagement.

## Breaking Ground: Architecture, Art, and Performance as a Tool of Engaged Design

Mo Zell, University of Wisconsin-Milwaukee

Joelle Worm, University of Wisconsin-Milwaukee

Emilia Layden, Haggerty Art Museum

Marc A. Roehrle, University of Wisconsin-Milwaukee

Breaking Ground, a temporary installation situated on an urban campus, brought together a museum, an architectural installation, and a dance performance to initiate a reexamination of the relationships between space, place, and activity. The modest sculpture garden at Marquette University's Haggerty Museum of Art served as the site for the installation. Commissioned for a group show titled 'Current Tendencies IV: Topography Transformed,' the architects created a temporary installation that traced the pathways through the garden then elevated the users above the ground plane to reconsider an existing context while testing the phenomenological qualities of building materials and tectonics. Changes in elevation and layers of intimacy enhanced by the changing transparency of the polycarbonate provided a dynamic stage for an improvisational dance piece. Blurring their respective roles, dancers, musicians, and audience members interacted with one another and with Breaking Ground by engaging the pathways and landscape of the sculpture garden. The purposeful siting of the installation disrupted a number of existing experiences for the museum, patrons/audience, and the performers; eliciting a conversation regarding the roles of the arts, institutions and experience within the public realm.

## **Product / Process:**

### **Balancing the Deliverables in Academic Design/Build**

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Date: Saturday, March 17, 2018

Time: 2:30:00 PM - 4:00:00 PM

Topic Chair: Chad Schwartz, Kansas State University

## **Reframing Vacancy:**

### **Designing & Rebuilding in Post-Recession Cleveland**

Kristen Zeiber, Kent State University

From 2014 through 2016, an architecture school in Northeast Ohio worked to rehabilitate a vacant house in Cleveland. The project was speculative: there was no client, other than a hypothetical end buyer. The building chosen, a sturdy brick 1920s house, was abandoned, condemned, and had narrowly avoided demolition. The neighborhood, St. Clair-Superior, had a median household income of \$19,000; a median home sale price of under \$10,000; and dozens of other vacant houses within a block. Nevertheless, the design team believed in the potential for architecture students, stepping in where the private sector would not, to pool their creative energies and labor to create a project that could simultaneously teach the students about the real-world complications to their studio ideas and also deliver an attractive, market-friendly home back into the larger urban fabric of a distressed neighborhood.

The project was ambitious and the stakes were high, particularly for a new design/build program. Though the house was eventually sold, throughout the process the project wrestled with the same questions many design/build projects do: What constitutes the best “design decision” when working with real materials and a real user? Who makes those decisions - students, instructors, neighborhood partners, someone else? How can we as educators ensure that the pedagogical needs of the architecture students are being met, while ultimately in service of a larger end product? Uniquely, however, this project also attempted to answer the question: can a low-cost residential design/build program point a way forward for tackling Cleveland’s vacant housing and stemming the loss of the city’s historic neighborhoods?

Over the course of the project, the mission - to reclaim one of Cleveland’s many vacant houses - struggled to perfectly align with the simultaneous pedagogy of learning by doing, causing tensions and setbacks. That tension, however, was ultimately an opportunity for growth and learning for the students, instructor, and project manager alike.

## Erasing the Product

John G. Poros, Mississippi State University

Alexis Gregory, Mississippi State University

Design / Build pedagogy has tended to focus on full scale construction with clients outside of the academy. While students learning how to construct in full scale and interact with a client are a plus of this approach, there are also many pitfalls. The greatest of these pitfalls is the overwhelming need to create a completed, functional building over the need for students to understand and explore how design, drawings, and specifications become translated into construction. The studio described in this paper attempts to stand that relationship on its head, minimizing the final product in order to explore more thoroughly the process of communicating construction.

## Designing for Failure in the Designbuild Studio

Chad Kraus, University of Kansas

The designbuild studio, as a form of live project, often engages entities external to academia; these types of endeavors straddle the conventionally distinct realms of academia and the profession. The intersection of hands-on education with real world contexts raises a potentially complicated ethical dilemma: In striving to maximize student learning for each student, while simultaneously striving to deliver the best possible work of architecture, what happens when these two goals find themselves at odds? This paper explores salutary failure – of architectural product and, occasionally, of architectural pedagogy – in the designbuild studio through the lens of a series of designbuild projects. These explorations include strategies for anticipating and guiding potential failures and for designing in the generosity to accept potential failures, such as employing design strategies that benefit from expressing traces of the thing having been made, i.e. using materials or approaches that are all the more beautiful or compelling when they are not perfectly executed. Yet, despite careful planning and measured expectations and despite anticipating and preemptively guiding potential failure points, error creeps in. Isolated failure in the products of designbuild efforts must not be understood only in a negative sense, as some failures can be led to productive ends. There are, however, some failures that are far too consequential to be allowed to happen. While some designbuild educators are loath to admit it, there are instances when the success of the project requires that potential lessons are interrupted or circumvented in order to ensure that the quality of the eventual product is not compromised, or that safety is not jeopardized. However, in circumstances where product success overrides pedagogical aims, all is not lost, pedagogically speaking. Despite every precaution, in the world of the live project there are no guarantees against detrimental failure. Yet, even detrimental failure has the potential to yield pedagogical benefits, as this paper illustrates. When attempting to strike a balance between maintaining the craft of pedagogy with maintaining the craft of practice, it is useful to consider that designing for failure in the work of architecture not only has salutary effects on the work itself, but also leads to some of the deepest lessons in the designbuild studio.

## The Academic Design/Build; A Model of Mutual Aid and Product/Process Integrity

Travis Bell, Portland State University

The academic design/build project eschews the typical economic model for architectural project delivery in critical ways and in so doing offers a unique opportunity to demonstrate an alternative perspective on architecture's role in society. The academic design/build project, due to the deemphasizing of the product and the overemphasizing of the methods of production, is less an example of architecture as economic activity and more an example of architecture as communal activity. To envision architecture as communal activity is, many would argue, a vast improvement over its rather cold formulation as a purely functional sector of economic activity; something akin to roads, power-grids and general infrastructure. More critically, to envision architecture as communal activity offers the possibility of its significance as a form of community in and of itself; This conception is broader and more inclusive than the increasingly common perception of architecture as power made visible in material form (architecture as a tool for the 1%).

This paper argues that the foundational concept in envisioning architecture as a form of communal activity is seeing the methods of production, as well as the final products, as acts of mutual aid between various members and organizations within the community. Through a focus on mutual aid, as an organizational scheme, the academic design/build project can position architecture as a series of interrelated acts of voluntary gratitude; a learning tool, a method of production, a public service, a product and a process. There are many ways to pedagogically and economically structure an academic design/build project, but few will nurture academic integrity and product integrity as effectively as one built on the concept of mutual aid.

This paper offers a series of topical descriptions of the most recent Diversion Design/Build Studio project: The 2017 Treeline Stage. Under the model of mutual aid, particular methods and organizational structures have suggested themselves in regards to our products and processes. Indeed, the nature of the relationship between product/process is directly impacted, in positive ways, by the decision to explore this sort of organizational structure. It is a unique project that has allowed each stakeholder full agency of their respective products and processes while simultaneously aiding other stakeholders to attain desired outcomes. By helping one another, we have each helped ourselves.

## **The Next Digital Turn: Identifying Inequalities**

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Date: Saturday, March 17, 2018

Time: 2:30:00 PM - 4:00:00 PM

Topic Chairs: Nicholas Senske, Iowa State University

Shelby Elizabeth Doyle, Iowa State University

### **Tailored turfs, optimized orders, or insular enclaves: Projecting the possibilities of civic data.**

Sharon Wohl, Iowa State University

There is a growing awareness that the impact of Big Data will be far-reaching in terms of the planning, design, and management of urban systems. While some designers and engineers are quick to embrace the utopian potential implicit in the the 'optimization' strategies that data-monitoring would seem to offer, academic critics are, for the most part, more skeptical in their readings. A host of papers have raised the alarm bells regarding monitoring, surveillance, and lack of privacy issues associated with data acquisition (cite).

In a bid to both expand upon, and challenge these critiques, I wish to discuss other, more emancipatory potentials of ubiquitous data. Here, I am interested not so much in the 'big' data that has so captured our attention, but rather in the prevalence of distributed and massive 'little' data: that is to say, data that has less to do with capturing overall trends and managing these from the top-down, and moreso with understanding data that is individually curated and controlled from the bottom-up.

This paper considers an alternative way of thinking about civic data, one that explores options to navigate personally curated 'data-scapes'. These scapes hold the capacity be emancipatory by breaking away from the hegemonic power of large-scale decision-makers. Here, we enter into the power of 'the long tail' (Chris Anderson), whereby small scale needs and actions become more tenable. At the same time, this approach is not without risk. Recent political events have highlighted the problems associated with self-curated 'echo-chambers' that reinforce parochial perspectives as opposed to exposing individuals to multiple realities. If civility is related to increasing multiplicity and tolerance, then how will we protect against urbanisms that self-curate into highly specialized niches that foster isolationism?

This paper will use insights gained from the field of self-organizing complex systems to try to unravel how 'small data' - organized through bottom-up processes - may hold the power to create new forms of urban engagement. Rather than a top-down urbanism informed by data collection and imposed by planning authorities, the paper considers how new orders – ways of living and experiencing the city – might be generated in a self-organizing manner from the bottom-up.

### **Systems and Others: Inclusion and Agency in Willis and Associates' CARLA Platform**

Meredith Sattler, California Polytechnic State University

Twenty years before the 'Digital Turn,' the architecture firm of Beverly Willis and Associates innovated the Computerized Approach to Residential Land Analysis (CARLA) workflow. CARLA captured a range of non-human others, within a systems-based environmental design process, developed to optimize the cost and environmental impact of large-scale residential development in challenging hillslope sites. Emerging from the confluence of novel environmental policy, economic depression, and the dawn of Computer Assisted Overlay Mapping, CARLA not only redefined the firm's scope of services to attract large developer driven projects such as Oahu's Aliamanu Community for Military Housing project, which produced 2,600 units of housing, safely, within a volcanic caldera, but simultaneously prototyped complex systemic computational design strategies years ahead of their ubiquitous use within design firms. In the 1970's, CARLA leveraged the use of 'Big Data' and algorithms in the design process thereby rehearsing contemporary ethical debates surrounding agency in systems thinking and inclusion, through the strategic formation of a hybrid digital-analog, and ultimately political, design platform.

## Architectural Spaces as Living Organisms: Reflecting Inhabitants' Psychology and Behavior in the Space Through Embedded Responsiveness and Intelligence

Mona Ghandi, Washington State University

Advances in computational algorithmic design, data sensing, information technology, material science, and fabrication technology have enabled architects to create adaptive spaces. Despite the high level of efficiency and sustainability that have been introduced through adaptive thinking, users' physiological and neurological needs is an area yet to be further explored. The objective of this paper is to offer an approach to democratize design and rethink the conventional rigid, solid architectural spaces in favor of structures that respond to users' deeper levels of engagement such as thoughts and feelings. It contributes to the design of future spaces that will be considered living organisms as they learn users' behavior and respond to their deeper needs and desires in real-time. This interdisciplinary research aims to create spaces whose capacity to resonate with immaterial aspects of the human, such as cognitive synapses and feeling, make them particularly compassionate. It explores the future of our intelligent environment through embedded responsiveness, drawing upon connections between architecture, data science, and other related technological advances. "Smart Architecture" lies at the center of its inquiry, examining the impact of robotized self-adjusting structures, relying on programmable materials and sensory network to allow architectural spaces to change and respond to real-time data in a fluid manner. Of its many consequences, the project has significant ethical implications, specifically as related to the medical field, tackling problems such as individuals with disabilities, neuromuscular diseases, motor system disorders, PTSD, and autism, ultimately empowering individuals with these deficiencies to regain control over their environments.



## Soft Materials: Assessing Architects' Roles as Ethical Producers of Digital Technology

Maya Przybylski, University of Waterloo

This paper exposes the ethical implications of custom computational components embedded in architectural projects. It argues that these components, identified as 'soft materials', constitute part of a project's material assembly and should be subjected to similar ethical considerations targeted at other, more physical, project aspects. This, in turn, necessitates an expansion of knowledge and methods and, to this end, we present work on building capacity for richer engagement with the socio-cultural dimensions of projects' computational components. We focus on data as a key component and present methods with which designers can develop a more sophisticated understanding of the data used in their work. These methods guide an exercise in unpacking a specific project's data components along dimensions, such as objectivity and accuracy, which have inextricable links to ethical concerns, such as inclusion and access.

## Open - Urbanism

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Date: Saturday, March 17, 2018

Time: 4:30:00 PM - 6:00:00 PM

Topic Chair: Carie Penabad, University of Miami

### Visualizing Equity: Learning from “Data Science for Social Good” in the Built Environment

Gundula Proksch, University of Washington

Rachel Berney, University of Washington

Data science has developed a culture of “data science for social good,” or DSSG, to address the ethical dilemma that their work and innovations benefit primarily the corporate and investment sectors. DSSG programs provide data analysis to public and nonprofit organizations with limited access to resources. A multidisciplinary team from a built environment college had the opportunity to participate in a DSSG summer program. Their project focused on identifying the most significant indicators of equity and the building of a web-based tool for analyzing and visualizing urban equity across the built fabric of a city. The tool is capable of visually displaying the raw data sets that were sourced from the US Census Bureau and city records as well as analysis from a structural equation model.

The team successfully explored how urban equity could be better understood and hopefully, better mitigated by combining the domain knowledge of the built environment and data science. Four key lessons emerged from the project experience. These include (1) the use of big data for social good and the underlying DSSG culture, (2) the importance and use of big data in the built environment, (3) the potential impact of the web-based tool itself, and (4) reflections on multidisciplinary collaboration and teaching.

As built environment colleges continue to define and address twenty-first-century challenges, especially through the lens of urban systems and data, this project is an example of a built environment-generated, public-facing tool that can serve the city, university, and community equally. The multidisciplinary collaboration in the DSSG program created a tremendous opportunity to answer specific inquiries about visualizing equity in spatial form and supporting that visual analysis with the rigor of a model. Working on urban equity is a complex subject that no single discipline can own or hope to solve on its own.

### Marine Urbanism: The Impact of Sea Level Rise on the Identity of Future Cities in The Bahamas

Kenyon Osborne, Miami University

Global warming is partly responsible for melting ice sheets in the arctic regions and the expansion of the oceans worldwide. The risk of flooding on a universal scale threatens to fully submerge many coastal cities and even whole countries as sea level rises to claim inhabited land. With 80% of the terrestrial footprint resting within 1 meter (3 feet) of sea level, The Commonwealth of The Bahamas is one of these countries whose coastal settlements and their consequent way of

life are being threatened by this emerging reality. As the impact from global climate change continues to augment these dangers of flooding due to sea level rise, it is imperative that innovative methods of adaptive urbanization be considered to sustain the country's growing populations.

This paper presents an exploration into a dynamic form of urban implementation that may present a new frontier for resilience in future cities built in the small urban archipelago of The Bahamas. Interviews conducted with locals and visiting researchers help to assess the effectiveness of current flood prevention strategies and measure public interest for marine living and its opportunities. Recent articles from local news sources paint a narrative for the need of resilient urban implementation. Scientific literature and case studies reveal the exclusive advantages that maritime urban environments present for resiliency, social, and economic sustainability.

The goal of this paper is to illustrate how a floating urban setting can not only neutralize the flood threat to future cities built in the Bahamas but also increase their capacity for economic improvement and sustainability.

## A Comparative Study of Environmental Performance Indicators of Asian Eco-Cities

Zhongjie Lin, University of North Carolina at Charlotte

The past decade has witnessed an accelerated growth of projects translating the Western concept of eco-city into practices of city building. Eco-city is now a global phenomenon, yet Asia sees particularly notable development with strong governmental interventions characterized by comprehensive national initiatives of model eco-city. In Japan, the central government launched an ambitious "Eco-Model Cities" scheme at the 2008 G8 Summit, and has by far designated twenty-three Eco-Model Cities. Meanwhile, a massive eco-city movement is taking place in China, where hundreds of towns have laid out their plans to become an eco-city. This paper compares the planning and development of model eco-cities in Japan and China, using Kobe and Tianjin for case studies to examine their common and contrasting approaches to ecological urbanism, their respective design strategies and technological measures, the relationship between the eco-city building and local economic development, the roles played by the governments and the private sector in this effort, and the influence of such exemplary projects on the rest of the country. The comparative research focusing on their Key Performances Indicators illuminates their different approaches to building an eco-city, between new town and retrofit, between top down directive and bottom up force, between eco-city as technology and as culture. This paper aims to offer a critical insight into the changing ideas of urbanity in Asian society, and enhance understanding of the global issues of sustainable urbanism.

## Tourism and Ethics in Japanese Shrinking Cities

Mari Fujita, University of British Columbia

Within Japan, a slow moving crisis is underway. The elderly population is growing, yet the overall population is shrinking, and cities and villages across the country are shrinking. By 2040, the National Institution of Population and Social Security has predicted that the population will drop 20 million from 127 mil. to 107 mil. people. And that in this same time period, 896 cities, towns, and villages are predicted to become extinct.

The shrinking of Japanese cities is not a new phenomenon but one that has been ongoing since Japan rapidly urbanized after World War II. The response by the Central Government of Japan is to look to tourism to breathe life back into shrinking cities and to save the economy overall. Through a multi-tiered program of funding development projects, softening visa policies, and the expansion of hotels, airports and flight itineraries / frequencies, the government is making Japan more accessible physically, financially, and psychologically. Ambitions targets for annual number for foreign visitors have been set, escalating with the Olympic Games that will be hosted in Tokyo in 2020. As all levels of society in Japan prepare for a future married to tourism, the country is undergoing extreme social and spatial transformation.

Japan is not alone in its quest to rebuild an economy around tourism. According to the United Nations World Tourism Organization (UNWTO), 940 million people engaged in international tourism in 2010, generating \$919 billion U.S. dollars. UNWTO Facts and Figures show roughly a 5% increase in tourism every year since 2010, making tourism one of the world's largest industries as well as one of the fastest-growing industries.

A critical component of the growing tourism industry is a growing awareness that tourism changes places. Research, theories, codes, and ethics have been in development since the 1950's, when tourism was truly established as an industry, to study the phenomenon of tourism. The Global Code of Ethics for Tourism (GCET) is a set of principles crafted by the United Nations World Tourism Organization, and adopted in 1999. The Code of Ethics guides all stakeholders in the tourism industry towards "Responsible and sustainable tourism ... [that takes] ... ethical questions on board and reconciles any tensions between economy and ecology, environment and development, openness and the protection of social and cultural identities."

This paper will use the "Art Islands" in the Seto Inland Sea as a case study to consider how tourism oriented development is bringing about change to the three islands. Established codes of ethics will be used as a framework against which to measure and contemplate how Naoshima, Teshima and Inujima Island have and will continue to change. These shrinking cities and their new economies challenge the existing models and theories of the city that we have as architects, landscape architects, designers, and historians of the city. As tourism has become one of the fastest-growing industries, to consider ethics in tourism as it relates to the design and construction of the built environment, is an urgent project.

## **By Any Means Necessary**

Date: Saturday, March 17, 2018

Time: 4:30:00 PM - 6:00:00 PM

Topic Chairs: Britt Eversole, Syracuse University

Mireille Roddier, University of Michigan

### **Jefferson, Hip-Hop, and The Grid**

Sekou Cooke, Syracuse University

Nadia M. Anderson, University of North Carolina at Charlotte

Post-Modernist juggernauts, “The New York Five” (Peter Eisenman, Michael Graves, Charles Gwathmey, John Hejduk, and Richard Meier), captured the attention of architectural theorists for many years after the CASE group (Conference of Architects for the Study of the Environment) first discussed their work at the Museum of Modern Art in 1969. Their redirection of the functionalism introduced by early Modernist a half-century before, toward more formalist methods of producing architecture, dominated discourse within the discipline for the rest of the 1900s. Extensive use of purist geometries and surface materials earned them, and others exuding similar operational tendencies (including Colin Rowe and Kenneth Frampton), the nickname “The Whites,” setting off a pseudo-rivalry with other less puritanical practitioners, such as Robert Venturi, Robert Stern, and Vincent Scully, contrastingly dubbed “The Grays.” Debates about their ideologies and methodologies were so compelling that another half-century later theorists like Emanuela Giudice continue to reference them. Giudice’s admission that “the debate that elapsed between the “Whites” and “Grays” showed the need to re-establish ... a discipline devoid of identity...” is the most damning indictment of the entire Post-Modern movement. This argument assumes that removing identity would result in a more evolved architectural expression and that design, in practice and theory, can and should be ethically neutral. As artist and architectural educator Amanda Williams puts it, “I was always so offended when they talked about them as if it had nothing to do with race.” For Williams, any conversation about the “Whites” and “Grays” was incomplete without asking about “The Blacks.” To suggest that architecture can be neutral negates that it has any connection to race, gender, wealth, or anything that builds power into the physical environment. This suggestion, according to Dutton and Mann, is completely false. “Architecture... as discourse, discipline, and form, operates at the intersection of power, relations of production, culture, and representation and is instrumental to the construction of our identities and our differences, to shaping how we know the world.” We discuss here how architectural methods, as demonstrated by the use of supposedly benign grids, expose how biased values become part of our constructed reality.

### **Outside: Extreme Environments and Creative Resistance**

George Elvin, Ball State University

Climate change is sparking demand for new sources of knowledge in resilient design. Extreme environments are abundant sources of this knowledge because they are home to plants, animals and people already well adapted to harsh climates. But the people living in extreme environments are often indigenous or aboriginal people marginalized by another culture. This paper explores the

consequences for indigenous and aboriginal people in extreme environments as they are asked to divulge their sacred or propriety knowledge to help address a global climate problem they had almost nothing to do with creating.

## Deja Vu: Ethics of a Gentleman's Club

Marc Maxey, University of Nebraska-Lincoln

To speak about money in architecture is taboo. For the dignified architect the matter is impolite and unprofessional, for the critical academic anything but resistance is suspect. The architect as a figure of respect and a front-man for the built environment was manicured by the American Institute of Architects (AIA) for more than a century to be professionals; stewards of wealthy patrons' interests and boosters of public good. Such evidence exists in the AIA Code of Ethics and Professional Conduct, which distinguishes architects as providing professional services for the greater benefit of the community. Yet, the ethics of architectural practice under the AIA's client-based, fee-for-service model avoids an ethical position by allowing architects to operate at arm's length to the source of money, labor, politics, and in many cases the architecture itself. Charting the AIA code of ethics, from its first draft of 1909 to the present offers evolutionary evidence of the architect's ethical crisis in a changing discipline and profession.

In the eyes of the AIA, any notion that an architect produced a commodity in a business-like fashion was absurd—tradesmen and salesmen did that—not professionals. The fees for service that an architect would charge a client were not readily up for negotiation and instead members would refer to the AIA's minimum fee schedule. While this was the prevailing model through early and late modernism, radical changes to the architecture profession and discipline during the 1960s and 1970s disrupted the figure of the architect and ushered in a new era of architecture. Although postmodernism is often read through the building as image (or style), new procedures in the production and governance of architecture are more telling of architecture's transformation. Several important dates relating to the AIA code of ethics (1964, 1970, 1977, 1980, and 1987) track new modes of architectural practice including design-build delivery and architect-as-developer, most notably exemplified by John Portman. While Portman's association with architecture and real estate is often pigeonholed as corporate-capitalist, this methodology was also performed at smaller scales in architecture schools such as Yale during the same time period. The 1960s offers new definitions and concerns of real estate in both academia and practice. Not only does the AIA Code of Ethics offer historiographic evidence, the documents associated with an architecture project are no longer limited to the drawing set but expand to include financial instruments like the proforma, while real estate itself emerges as a distinct academic subject.

## Real Estate, Ethics, and the Problem of Pan Am

Michael Kubo, Massachusetts Institute of Technology

Perhaps no early episode did more to damage the public reputation of the modernist masters in the United States after the Second World War than the scandal over the Pan American Airways building in New York City. Designed by The Architects Collaborative (TAC) and Pietro Belluschi for the developer Erwin S. Wolfson as consultants to Emery Roth & Sons, at the time of its completion the massive slab of Pan Am was the largest commercial office building in the world. The project was mired in controversy from its origins, with many writers convinced that no office building of such scale should be built on the site at all, irrespective of its design. TAC and Belluschi stepped into this debate, tasked with rescuing the viability of the project through changes aimed at modifying the spatial and aesthetic impact of the slab in its urban context. Yet the final design fared no better in the eyes of its critics. Attacked for both its extreme scale and its perceived banality—"a colossal collection of minimums," as Ada Louise Huxtable derided it—the building was judged by critics to be guilty of a litany of unpardonable sins, urbanistic and aesthetic.

Revisiting the circumstances surrounding Pan Am beyond such positive or negative assessments reveals a set of debates around questions of authorship, ethics and social responsibility, public versus private development, and the role of the architect in engaging or rejecting the demands of a commission. Critical in these debates was the conflation of judgement surrounding the building with the personae of its primary architectural protagonists—Richard Roth, Pietro Belluschi, and most significantly Walter Gropius—as a referendum on the fate of the modernist masters and a benchmark for critics and the public alike to assess the state of mainstream postwar architectural practice in the United States.

## **Educating for Hubris or Humility?**

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Date: Saturday, March 17, 2018

Time: 4:30:00 PM - 6:00:00 PM

Topic Chair: Kevin Mitchell, American University of Sharjah

### **A Place-based Ethic of Care: The Beginnings of the Utah School**

Keith Diaz Moore, University of Utah

This manuscript provides a case study of how Tronto's Ethic of Care and the particularity of place for a College of Architecture and Planning has informed the thought process of curricular transformation discussions. Tronto's ethic of care expresses four ethical elements: attentiveness, responsibility, competence and responsiveness. These four have been negotiated with place-based considerations captured in the phrase "the idea of mountain." This negotiation results in four commitments and the recognition of mindsets and attitudes faculty seek to develop through pedagogical transformation. The four commitments are: resilience, responsibility, respect and response which capture interdependencies between mindsets (systemic, empathetic) and attitudes (humility, urgency) asserted to be essential to 21st century environmental design. Such massive change suggests a thorough reconsideration of the "hidden curriculum" found in the design disciplines, particularly of early design education. Rather than beginning with skills and knowledge as is typically found in architecture curricula, this College has launched a Design Foundations sequence of three courses that provides an initial interaction with the mindsets and attitudes expressed above. Focus becomes on preparing the mind and character necessary to become agents of transformational change regardless of students' eventual disciplinary choice.

### **Creating an Academic Community of Inquiry: Educating Architects to Embrace a People-Centered View**

Lauren Matchison, University of Southern California

It can be argued that pedagogy which privileges technology now dominates university-level architecture curriculum and culture. The result of this latest phase of determinism accelerates the distancing of the design process from both the people it is intended to serve and the natural and built environment that architecture should relate to, as it has in the increasingly distant past. However, not all practitioners or educators support this trend. A contrarian view has recently gained momentum, and this paper addresses the re-emergence of a people-centered agenda in the form of public interest architecture. Ideas explored here pay special attention to developing a culture of 'community of inquiry' within architectural pedagogy, one that thoroughly incorporates social issues and more accurately reflects the collaborative nature of contemporary architectural practice. First, the paper establishes an understanding of the concept of a community of inquiry, and its relationship to architectural pedagogy. It then illustrates that an academic community of inquiry naturally fosters multidimensional thinking and supports the development of empathy and high 'other-focus,' which is the ability to concentrate on the interest and well-being of others. Finally, it considers two effective professional models of communities of



inquiry in public interest architecture: MASS Design Group and Kéré Architecture. The paper ultimately argues that a new educational model is needed which mediates Positivism and embraces people, advancing sensitive design solutions which deeply engage local social, economic and ecological issues.

## Empathizing with Clients: Teaching Students How to Design for 'The Other'

Alexis Gregory, Mississippi State University

"By acting to further the interests of the other, one serves one's own interests as well." (1)

This quote by Celeste Friend discusses how David Gauthier expanded on Thomas Hobbes views of Social Contract Theory by arguing for cooperation of self-interested parties based on rationality. Gauthier was using the Prisoner's Dilemma argument, but the theory can also be used to format pedagogy to teach architecture students the importance of working equally together with non-profit clients, or in this context "the other." However, rationality alone cannot be used to teach students the importance of egalitarianism and learning from those different from them. Students must also be taught to respect and empower the clients with whom they are working. This paper discusses examples of how the author engaged students using service-learning standards such as reflection and reciprocity, as well as alternative methods such as limited role-playing through protagonist stories. The results are students who are more engaged with and empathetic to the clients, but also more aware of the social justice issues that impact the field of architecture and the "public" that it affects.

(1) Friend, Celeste. "Social Contract Theory." Internet Encyclopedia of Philosophy, Internet Encyclopedia of Philosophy, [www.iep.utm.edu/soc-cont/](http://www.iep.utm.edu/soc-cont/).