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**Emergent Models of Architectural Education: Pedagogy, Curriculum + Students**

**Frances Bronet, University of Oregon**

**Tomoaki Tanaka, Meiji University**

**Unlikely Partnerships**

John C. Brittingham, Montana State University

This paper presentation provides an overview of three graduate level studios that pedagogically provide a platform for interdisciplinary, collaborative work in unusual partnerships searching for new paradigms of pedagogy, collaboration, team composition, sustainable design, and stewardship.

The first partnership between the private sector, the National Park Service, and the academy has taken place over a period of some ten years. The aspiration of this unusual partnership of people and their perspectives is to generate a new model/paradigm for looking at one of the country's greatest resources - Yellowstone National Park.

As the strategy unfolded, fourteen regional, national, and international design firms were invited to participate in three five-day design charrettes at Yellowstone Lake Lodge, Old Faithful, and Mammoth Hot Springs. Charrettes were preceded by a graduate level studio where students worked directly with park staff in Yellowstone's archives, developed the professional charrette brief, collaboratively developed their own solution to the brief, and then participated in the professional charrette as team members. The outcomes were “gifted” to the park and were instrumental in the development of their comprehensive master-planning efforts.

The second unlikely partnership was comprised of the Historic Big Island of Hawaii Kukai‘au Ranch, the non-profit Kohala Center, and the academy. In this studio students worked collaboratively with faculty and students from the schools of business, and agriculture to develop a self-sustaining ranch and education center that would protect the land in perpetuity. Students additionally worked with native plant cultural historians, conservation based ranching experts, conservation based development experts, conservation easement attorneys, the Kukai‘au owners, ranch staff, etc. This collaborative proposal was diversified in approach and themed around a contemporary vision of the ahupu‘a. It included a business analysis of cattle, agriculture, native forests reforestation, carbon sequestration tax advantages, energy (including rain, wind, water, and sun), conservation easements and resultant tax benefits, a not-for-profit research institute, education and outreach, historic preservation and resultant tax advantages, stewardship of place, land restoration, Hawaiian homelands agriculture and housing, and more. This proposal is in the preliminary phases of implementation. Work performed by the students has been conservatively valued at $250,000 by the owners’ attorneys.

The third partnership included the Grand Canyon River Heritage Coalition (GCRHC), Grand Canyon National Park, and the academy all in support of submitting a proposal for the California Architectural Foundation William Turnbull + Arid Lands Institute “Drylands Design: An Open Ideas Competition for Retrofitting the American West”. Additional advisors included historians, river guides, interpretative experts, ecologists, water specialists, etc. The outcome of the studio, titled SLOW FLOW, is a phased remediation proposal for Grand Canyon National Park’s South Rim, its 5 million annual visitors (projected to be doubled by 2050), employees, residents, their collective annual water consumption, and the cost of that consumption. Each scale of the proposition is defined by a top down/bottom up strategy mitigating the water-energy nexus that strives to inspire dissemination and conservation through education, exposure of systems, and enhanced visitor experience. The proposal received national and international recognition.

**Integration**

Donna Kacmar, University of Houston

We recently revised our curriculum to integrate what has traditionally been thought of as technical “support” courses - classes such as structures, systems, programming, and construction - with the design studio. This curriculum shift is a result of change in leadership at multiple levels in our college, including a new Dean, as well as a desired alignment with the evolution happening in the profession. Architectural practices, in their quest to design high performance buildings, are integrating technical requirements earlier and earlier in the design process.

Our curriculum revisions were motivated by more than the desire to integrate technology with design. Our primary goal, to increase the quality of education and (ultimately) the preparation of our professional community, requires that we provide students with enough structure early on so they have a common solid foundation for their learning and then compress the curriculum to allow for the earlier development of independent thinking and critical thinking skills. Integration of technology is also one way to help prepare students for the successful completion of comprehensive design studio earlier in their degree plans in order to allow them to have more options for upper level studios, thus allowing them to have more independent and specific in-depth design investigations during their final studios.

Our first strategy was one of simple adjacency in time that allows for both formal and informal overlap. The second strategy we implemented is one of division; we divided the technical content we expected the students to be familiar with into smaller pieces of information, organized by scope and depth rather than subject matter. Our third strategy is to cross train our existing faculty.

Rather than “leaving that to the tech guys” the design studio faculty have been invited to have a greater role in what and how technical information is presented to the students.

The first four strategies allowed for the integration of the content delivered in technical support classes and design studio to truly begin. Once the courses and faculty are adjacent in time and space, technical content is divided differently and more directly tied to studio levels, all faculty are more conversant in the full range of building science issues, and we have a schedule that provides time and space to overlap we can truly begin to integrate the technical course requirements with studio learning.

This new curriculum has many hurdles to its implementation including resistance to change, the perception (or reality) of increased work load, and a general belief that the current curriculum did not need to be revisited. This paper focuses on the specific areas of success and areas that need still adjustment from our recent curriculum shift.
Emergent Models of Architectural Education Continued

Studio and the City: A Model for Urban Engagement in Medellín, Columbia
Madlen Simon, University of Maryland

World population in the 21st century is rapidly urbanizing. By 2050, more than half of all people lived in urban areas. By 2030, 60% of people are projected to live in urban areas and by 2050 that number will rise to 70%. 1 21st century population growth is largely fueled by the migration of poor people. The United Nations Population Fund suggests three policy initiatives to address this rapid urbanization: 1. Respecting the rights of the poor to the city, 2. Envisioning the use of urban space to reduce poverty and promote sustainability, and 3. Improving the nature and form of future urban expansion. 2

How can schools of architecture tackle these challenges? Medellín, Columbia offers a case study of an emergent model of architectural education in which the city is the laboratory for studying urban problems and the school an agent of urban transformation. This case study examines the engagement between the School of Design and Architecture of the Pontifical Bolivarian University and the city of Medellín, beginning twenty years ago, resulting in a transformative program of urban interventions benefiting city center and informal settlements alike and a cadre of graduates who continue to execute that vision.

Research will be conducted in Medellin, including visits to the urban projects and the school and interviews with city officials, faculty, alumni in architectural practice, and current students. Studio programs and projects will be examined and compared with competition briefs and built works. Major topics of inquiry will be: 1. How were the studios structured? 2. Were the students addressing the problems of their own communities or did the projects for the informal settlements take more privileged students outside the realm of their own experience? If so, how did students develop the requisite empathy and build trust with community members? 3. How did the school deal with the risks involved in sending students into crime-ridden favelas? 3. How did the projects move from academic exercises to realization? 4. Did these experiences transform the professional goals of the students involved? 5. Is the city-school synergy ongoing? The case study will identify factors for success, challenges, and generalizable lessons from the Medellin studios.

This case study comes at a time when ACSA schools are seeking ways to engage with communities both at home and abroad. Some programs, such as the University of Oregon’s Sustainable Cities Initiative, are creating models for student engagement in urban areas of their home state. Other programs, such as the University's labs, engage students in urban problems around the globe. This case study offers as an educational model a program that sparked real and ongoing change in a city facing current challenges of rapid urbanization and poverty. The lessons of this case study can inform other schools as they develop programs to tackle issues of sustainable urbanism both locally and globally.


Market Innovation for Social Practice
Margarette Leite, Portland State University

In most Universities, innovation in research and product development involving business and industry partnerships are commonly linked to technologically focused science and engineering programs. Beyond their initial sponsorships, these innovations can lead to patent and copyright agreements that promise continued financial returns and recognition to those institutions and individuals involved. As budgets tighten, these endeavors receive greater encouragement, even pressure, by universities hoping to develop models of support generated by the output of their own faculty and students.

Schools of Architecture are not often at the forefronts of these activities as their primary pedagogical purpose is to educate a service sector profession not primarily engaged in research. Thankfully, architecture programs all over the US are adding coursework that includes community engagement with the goal of moving the profession toward greater social and societal relevance. The School of Architecture at (This Institution) has made major advances in this direction including the inauguration of one of the country’s first Centers for Public Interest Design (CPID). While few today would dispute the importance of this movement, there exist significant challenges to the implementation of the relatively difficult to fund opportunities in this area. The following projects described in this paper/presentation, outline some initiatives aimed at addressing those social goals in ways that may also achieve the kinds of market success exemplified by the more technologically focused innovations of other disciplines.

The first project, the SAGE green modular classroom, was designed and launched at (This Institution’s) School of Architecture. In addition to addressing the concerns of school communities regarding the health and wellbeing of students in poorly designed modular classrooms, this project provided a range of lessons for architecture students that expand on the traditional curriculum, including becoming partners in a copyrighted product that returns royalties to the university to support further research, as well as contributes potential downstream profits to project partners including the students themselves.

A second project at (This Institution) is underway with similar goals. In an Advanced Architectural Materials class, students have partnered with a local business to create market ready building products made from landfill-bound materials that also provide job creation for disabled individuals. The students test their proposals in (This Institution’s) federally funded Green Building Research Laboratory. At the end of the course, the students pitch their ideas at competitive “Clean Tech Challenge” event with the hopes of securing venture capital to develop their products and move them towards marketing.

These projects serve as models for how architecture schools can bridge the gaps between social goals, pedagogical reform and financial viability through the development of marketable innovations.

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Emergent Models of Architectural Education Continued

Footloose, Six Degrees of Separation
James Fowler Eckler Jr., Marywood University
Kate O’Connor, Marywood University

Learning to use the computer as a projective design tool, rather than a time-consuming representational device, is essential to beginning designers as they develop habits that will influence their education and continue into the profession. Traditional beginning design studios take students outside the world of their experience by teaching representation strategies that rely on abstraction. This project attempts to integrate hand techniques with digital image manipulation to extend and reinforce the lessons of spatially based conceptual design exercises.

In the project “Foot-loose _ Six Degrees of Separation,” students combined process oriented explorations with digital media and were encouraged to think through the computer and the hand simultaneously to reinforce the importance of multimedia processes in early design development. The speed of digital manipulation allowed students to quickly grasp how conceptual design translates into human experience. This pedagogical model encourages students to develop a digital sensibility at the inception of their design process.

An introduction to Photoshop produced a collage of information where the individual element informed the next and overlapped to create a tectonic assembly of space in a sectional format. The simple gesture of introducing digital poche and human silhouette figures produced a direct correlation of scale and therefore created an easily recognizable image for the beginning design student to grasp.

This type of digitally oriented introduction allowed students to learn the program’s ability to amplify and express specific attributes of their handcrafted drawings. This exercise presented the opportunity for students to design a spatial narrative by simply manipulating and combining the sizes of the figures on a computer screen. Contrary to typical architectural representations where figures populate a rendered view, the figures give each view meaning. With this exercise, students begin to understand how to manipulate a digital image with restraint and scalar specificity.

Using the twelve sections as a conceptual map, students manually translated the computer-generated sections into assemblies emphasizing the tectonic principles introduced in two-dimensions. These models were married to programmatically produce two comprehensive spaces, registering the connections and showcasing the explorations of the shoe. The physical shift back into 1:1 scale was an important step in fostering the awareness of the influence of digital media, as well as allowing students to develop both manual and digital skills at the same pace.

This example of a beginning design sequence demonstrates that students can be taught to think simultaneously through the computer and the hand. Appreciating the computer as a projective tool in this studio model promotes an actively engaged digital user that is able to design intuitively with the computer. Working back and forth between the hand and the computer at the onset of a design education enables the students to control their own process at each level without being limited by the manual or becoming trapped graphically by the digital.

From Scratch: Designing Architecture School
James Fowler Eckler Jr., Marywood University

The first years of an architectural education are critical to lay a foundation of design thinking and awareness upon which subsequent coursework can build. But, what of the beginning years of a school? It is in those years that many of the intangible qualities — studio culture, identity, expectations — of a design education are established. This proposal seeks to present a new twist on themes of beginning design. It will not approach them from a standpoint of the first years of a student’s education, but rather the first years of a school’s existence. Just as the beginnings of students’ education are formative in their development as architects, the beginnings of a school are formative in its development as an institution critically exploring the architectural discipline.

Architectural pedagogy is notoriously difficult to study. The objectives, content, and teaching methods that comprise course material, are often colored by an immaterial context of a school’s traditions and expectations. This positions a new school of architecture in an ideal position to investigate pedagogical technique. Successes and failures of projects and teaching methodology can be observed in an environment devoid of these forces that often guide the decisions of students regardless of studio parameters or project scope. Without prior cohorts, there is no “pattern-book” of projects for students to emulate. Results of pedagogical decisions are set apart from other factors that typically influence students’ success.

Lack of institutional traditions makes rapid curricular adjustments possible. There are no entrenched courses, or course content. There are no school specific projects to work around. This means that courses can be redefined, and curricula re-sequenced, without the need to overcome obstacles of uncritical establishment. How can we design continuity into a curriculum from its outset and still maintain an ethic of reflection and evaluation toward new iterations of the educational sequence?

Absence of standards set by prior generations of student work also presents enormous struggles in shaping curricula. For every benefit granted by a lack of an established “way of doing things,” there are struggles that must be addressed through pedagogy. Without a pre-existing studio culture or ingrained expectations, there are fewer assumptions that can be made by faculty. Things that can normally be taken for granted — rigor, work ethic, desire for experimentation — must be built into projects instead. How can identity be cultivated without sacrificing the malleability so crucial to a program’s evolution?

This paper is a report chronicling the evolution of a school of architecture from its inception through its first graduating class. It will address the curricular developments deployed as a direct result of pedagogical reflection and response to student performance. It will explore the evolution of curricular material as it was influenced by the acquisition of new facilities, equipment, and faculty expertise toward refining the goals and visions of the evolving institution. And, it will show evidence of the emerging identity of the school as it has been defined by the struggles, trials, and triumphs of both students and faculty paving the way forward.

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Emergent Models of Architectural Education Continued

Redefining Urban Spaces in New York City’s Chinatown through the Creation of Gateways
Esteban Beita, New York City College of Technology

Around the world and in the United States, Chinatowns are defined by gateways created to mark their various entry points. These gateways are of great importance to the community, marking the entrance to each Chinatown with an iconic structure that also attracts tourism. Cities like Yokohama, San Francisco, and Montréal all have impressive gateways welcoming visitors. Although New York City’s Chinatown is famous around the world, the gates of entry are not clearly delineated. Unless one knows its location, they are not easily found. One could be around the corner but wouldn’t know it. In recent years this has resulted in a decline in tourism, hurting much of the community and affecting the future of Chinatown. Chinatown is a cultural gem hidden in the city and would benefit greatly from the creation of gateways around its borders. Starting from “The Chinatown Partnership Master Plan”, created in collaboration with the Department of Transportation and Chinatown community members, five potential Gateway sites were established, plus one additional site defined by the students’ research.

During the 2012-2013 academic years, the Architecture Technology Department of New York City College of Technology of the City University of New York assigned its senior urban design studios to study and define key sites in New York City’s Chinatown. In cooperation with the NYC Chinatown Partnership, the NYC Department of Transportation, and Community Planning Boards, students and faculty studied the urban fabric of Chinatown and the various challenges facing it. Students in these courses (urban design studios) took part in an applied and unique educational experience; exposed to real-world conditions of working with city agencies and community members who were present at every design presentation during the semester. This provided the students with a unique jury that not only looked at the design aspects, but also provided feedback on the possibility of such designs being built in the future.

The designs for the gateways were completed in fulfillment of a final project requirement for graduation. The project brought a lot of excitement to the students; motivated by the prospect of working on a “real” project that would potentially be built. In addition, very little restrictions were placed on the project; allowing the students’ creativity and imagination to reign free. They were instructed to create a structure that was functional in addition to being “Iconic”. The concept was not limited to or confined by traditional Chinese architecture. Instead, the design need only be aesthetically captivating, address urban design issues of the area, and serve as an entrance marker into Chinatown.

Due to the collaboration with the Chinatown Partnership, hundreds of students had the opportunity to transform their ideas into proposals presented to the Chinatown Partnership, Department of Transportation and members of the Chinatown community.

The Power of the Collective: Recent Experiments in the Foundation Studies
Jae-Sung Chon, University of Manitoba

“The world has changed; the role of design has changed. And the way that designers are taught to engage with the world must change, too.” Joel Towers, Executive Dean, Parsons

This paper will review the recent pedagogical experiments that took place in the foundation years at the Faculty of Architecture University of Manitoba. Since 2009, number of questions emerged in response to the ‘change’: How do we foster a culture of collective (learning, thinking, and design)? What are the relevant (studio and course) topics? How do we re-frame the fundamental learnings (of space and form) so they become more relevant and accessible? What are the emerging topics and issues, and how do they integrate with the foundation learnings? (Logistically) How do we (team) teach big studio classes (100 students per year)? How do we create relevant linkages between topics within the courses, among courses and with studio contents? How do we integrate technology (i.e. CAD and digital fabrication) into the foundation studio teachings? These questions, in turn, triggered a series of strategic evolutions both in the structure and the contents of the program’s pedagogy. During this process a set of quasi-manifestos - i.e.: ‘power of the collective’ and ‘leveling of the techniques’ emerged among the teaching team and the students, as temporary guidelines directing the evolution: changes in the courses, their inter-relations, and in the context of the day-to-day navigation of pedagogy.

The accumulative effects of the experiments were acknowledged by set of recent event, including a shortlisting of projects at an international open competition Barge 2011 organized by Shift Boston (four project top with one within top six), content invitation to the National Stage Exhibition of the ‘Migrating Landscapes’ the Canada’s entry to Venice Architecture Biennale 2012, and the winning of the International Warming Huts Competition 2013, which was also constructed as a temporary public structure on the winter river trail.

The paper will first illustrate the structural changes within the larger institutional context, including the graduate and undergraduate studies. It will then discuss specific experiments and results within the foundation studies, with particular focus on the studio pedagogy and its interrelations with other courses. It will also discuss a set of working models that have been identified through the process as viable future options, including diaspora-studio, prototyping-studio, and (undergraduate) research-studios. Then, the paper will discuss the opportunities that such ‘experiments in the foundation’ are rendering within the architecture education, in strengthening its relevance within the larger contextual changes.
Emergent Models of Architectural Education Continued

Open Learning: Academic Relevance and New Modes for Learning and Application of Knowledge
Awilda I. Rodriguez, Oklahoma State University

In June 2012, Forbes listed Master of Architecture on the top 10 worst master’s degrees to obtain, based on salary and employment. Georgetown Center on Education published a report that portrays architecture major as worthless, and encourages students to make “better choices” based on their return on investment. This begs the question of how architectural education should be modified to deal with the shift in today’s societal consciousness and attest the relevance of architecture education in society.

All surveys still indicate that our professional capacity to have a valid impact for change on a multiplicity of complex socio-economic problems is greater today than in the past centuries (Blau 2001). Academia’s resistance to fundamental change is deeply rooted in traditions. The current organizational structure, by disciplinary sciences at universities, not only contributed to the stratification of knowledge but has also encapsulated specialized silos of expertise. Outside academia, these disciplinary structures are being shatter by economic forces and researchers are creating non-competitive collaborations to address properly complex problems.

In my view, there are few emerging areas affecting positive changes that are slowly altering the dynamics.

Structural Organization: The role of the architect has changed from the genius to more of a scenius one, where the communal intelligence and the intuition of the whole are effective. Few teachers are starting make their intellectual property available. They are slowly adopting a culture of commons and creating interdisciplinary and cross-organizational teams that intentionally break down departmental lines.

Technology: Academia is no longer the sole purveyor of knowledge and needs to use technology, not as a learning tool but the basis for change (Padrós 2011). Today, a formal education is not the only method of learning, and how academia will adapt to the customization and personalization of education will largely determine its relevance and impact with this new generation (Price 2013). Students increasingly want to ‘hack’ their education. With the arrival of cloud learning, social media and flipped classrooms, MOOCS, they are doing just that. Academia is now coming into direct competition with these learning opportunities.

Design Accountability: Another change has been the emphasis on socially conscious activist design and problem solving organized around creating individualized opportunities in an entrepreneurial manner or an application as is intended to be useful to a specific industry or society. Thus, research produced is specific to the context and subject in their processes and negotiations required for its implementation.

This paper will expose academic system, which is trapped in the midst of a relevance crisis and a failure to utilize emerging pedagogies, which are yet to be well systematized. To adapt, the world of academia must make use of technologies that are attempting to exploit their collaborative, interactive and innovative framework for a new learning culture (Ortega 2012). Relevance will mean that academia will be the center of innovation and a direct contributor to the socio-economic development. This new distributed knowledge production carries a greater expectation to the context it serves and ethos of return on investment.

Traveling on Fredericksburg Road: 120 Years in 12 Miles
Ian Caine, University of Texas At San Antonio

This paper describes the pedagogical approach of a graduate architecture seminar that investigated the historical foundations of suburban expansion in the United States. The class focused on the life of a single street: Fredericksburg Road in Austin, Texas. Fredericksburg Road, founded in the 1840s as a military route to the frontier, served a number of purposes throughout the years: as a camel route for the Army in 1855, as a path for troops during WWI, as an automotive link to the Old Spanish Trail highway in 1929, and most recently, as a highly traveled commercial arterial in the city. For the purposes of this design research project, Fredericksburg Road served as a suburban timeline, chronicling the physical expansion of one of the ten fastest growing cities in the United States.

The timeline simultaneously projected Fredericksburg Road across two axes: one marking time and one marking distance. Students recorded the time-axis over a period of 120 years, beginning in 1890 and ending in 2010. The 1890 starting point corresponded to the oldest and southern-most stretch of Fredericksburg, an area originating adjacent to the city’s historic core. The axis extended north towards the suburban periphery, terrain marked by big boxes, office parks, and cul-de-sacs. Students next measured the distance-axis across 12 miles, beginning with mile-0 and extending to mile-12. Similarly, the 0-mile marker corresponded to the older, southern portion of the road, while the 12-mile marker extended to the city’s more recent northern suburbs.

The product of the class was a 3-part public exhibition at a major cultural museum:

Exhibit 1 included a 33-foot x 9-foot morphological timeline choreographing 120 years and 12 miles of suburban development along Fredericksburg Road. Topics for GIS-based analysis included building typology, lot size, residential density, parking counts, land value, roads, sidewalks, program, zoning, transportation, and infrastructure.

Exhibit 2 offered an eight-minute short film that simulated the experience of driving on Fredericksburg Road. Students shot the sequence with a dashboard-mounted camera, then narrated and edited the footage using Adobe Premiere. A simulated “odometer” supplemented the film, simultaneously marking 120 years and 12 miles of history.

Exhibit 3 consisted of multiple oral histories, transcribed and edited into a short film by a faculty collaborator and curatorial researcher at the museum.

This paper proposes that the seminar’s pedagogical framework enabled students to make powerful connections between the road’s historical chronology, geographic expansion, and formal development. The use of film further permitted students to examine both perceptual and social issues. As an instrument for research, the timeline allowed students to measure and compare disparate elements, establishing sequence and order across time and distance. The learning outcome for students included a highly integrated comprehension of suburban history, geography, and form. The production of similar morphological timelines offers a robust and repeatable platform for the analyses of future streets and territories.
Emergent Models of Architectural Education Continued

Project Based Learning: Interdisciplinary Collaboration of Bio-Facades In Urban Environment
Kyoung-Hee Kim, University of North Carolina at Charlotte

Interdisciplinary collaboration has gained more importance in both academia and practice as a result of increasing demand on environmental agenda and building energy efficiency. Many building projects show the need for architects, engineers and building scientists with integrated backgrounds that span different disciplines. This integrated and collaborative design approach will prepare students to think critically in other design situations and real world problems. While it is clear that we do not currently integrate the important subjects of design, engineering, materials science, and fabrication/construction in architectural design, the advantage of doing so is apparent.

The paper was developed based on an interdisciplinary class offered in the School of Architecture at University of North Carolina at Charlotte in 2013 Spring term. The interdisciplinary class consisted of faculty and students from architecture, biology, and mechanical and civil engineering to develop a bio-façade system to enhance building sustainability under a NSF-EPA grant. Our overarching pedagogical goal was to give students a multidisciplinary experience in problem solving on a research project through integrating innovative technology into a broad spectrum of solutions. Twenty-four students from four departments initiated fundamental research in environmentally responsible design and provided a specific task that contributes to the research project goals and sustainable design pedagogy. Outcomes of this interdisciplinary class include new materials for use in teaching, faculty prepared to teach in new ways, and a student population able to benefit from this project-based interdisciplinary learning approach.

Learning from Design Disciplines: Importance of Understanding the Interdisciplinary Architecture Education
Tae Seo Koo, North Carolina State University

Design professions are characterized by complicated, interdisciplinary problems requiring cooperation of various professionals. Architecture education also needs various perspectives and knowledge to effectively deal with complicated architectural problems.

In contrast, design educational environments are characterized by strict disciplinary boundaries. Current approaches to architecture education tend to emphasize individual work, learning facts, and the analysis of artifacts. Not many architecture programs emphasize integrative activities as a fundamental part of the design curriculum. Scholars indicate the challenges and issues facing the design education community in the process of integrating interdisciplinary educational experiences into a traditional segregated educational curriculum.

In academic settings, researchers and scholars from design disciplines have become interested in interdisciplinary design due to the need to combine different environmental perspectives in order to improve the quality of design solutions. By combining these various disciplinary perspectives, researchers and scholars have been able to expand and connect boundaries of related disciplines. To understand the differences and similarities among design disciplines and respond to design activities becoming more complex, an interdisciplinary approach to design is crucial for academic as well as professional environments.

Interdisciplinary architecture education focuses on the interdisciplinarity which integrates design disciplines to promote design solutions from diverse design perspectives. Interdisciplinary architecture education allows designers to communicate and solve territorial design problems by integrating and learning from each discipline.

Interdisciplinary architecture education is a way of connecting various design aspects and also can be interpreted as an opportunity to expand the design education, collaboration, and interaction to the larger scale environmental problems caused by less interdisciplinary approaches and efforts in academic conditions. Interdisciplinary architecture education embraces the knowledge and interactions among different design disciplines and makes it possible to communicate with different ideas and thoughts by using interdisciplinary design skills.

The objective of this study is to begin to answer the question about how designers and researchers develop and improve interdisciplinary architecture educational skills and methods. This study investigates the current interdisciplinary efforts and structures of design curriculum in the University of the United States concentrating on two environmental design disciplines, architecture and landscape architecture. Both disciplines deal with design issues affecting the physical environment and frequently collaborate in professional settings.

This study also explores the current situations related to interdisciplinary architecture education by using a web-based data collection method dealing the major components of curriculum and is intended to provide beneficial indicators for introducing and expanding interdisciplinary architecture education in professional design disciplines.

The mission statements are counted and documented to understand what they are trying to accomplish through interdisciplinary programs. The name of the program indicates their focus and direction of study and how they are coordinated with related disciplines. The actual courses forming the curricular structure are investigated. The credit hours of courses are also considered for understanding the real interdisciplinary courses compared to traditional architecture courses. The name of department or college is included to articulate the departmental directions and how the actual curricular structure responds to interdisciplinary efforts.
Computational Regionalism  
Faysal Tabarra, American University of Sharjah

The universal pervasiveness and democratization of computational design methodologies in architecture is radically transforming the ways in which we generate ideas and communicate them. While this has led to a proliferation of innovation in architecture, one cannot ignore that an alarming air of sameness and homogeneity continues to mark architectural endeavours globally. The proposed presentation and paper describe an evolving teaching and research pedagogy being developed at an educational institution in the United Arab Emirates. The impetus for this developing pedagogy is to explicitly resist contemporary models of Computational Orientalism, potentially becoming an adaptive teaching prototype that can be deployed in regions struggling with similar issues.

The proposal argues that battling this alarming global homogeneity can be achieved by juxtaposing computational design methodologies with historical material cultures. More specifically, the teaching pedagogy works at revisiting the basics of computational design methodologies in architecture within the context of the Middle-East. Due to the influence of Islam in the Middle-East over the last 1400 years, architecture and material culture shifted towards the generative potential of geometry and pattern to supplement previous iconographic modes of material and visual cultures. Fittingly, computational design methodologies developed over recent decades have revived architects’ interests in geometry, patterns and systemic thinking. While the region continues to moves towards pastiche, value is seen in exploring the space between Middle-Eastern material culture and contemporary computational design methodologies through understanding both practices as generative, systemic, and adaptive. This allows for the development of a material culture that is both local and driven by the computational zeitgeist.

The proposal will be structured in three parts, all explicitly dealing with issues within a teaching environment. First, it will present an ongoing taxonomic exercise that classifies geometric and computational typologies of lines employed in Middle-Eastern architectural, material and visual cultures. This comes in direct opposition towards the archaic analysis of Middle-Eastern architecture that looks solely at spatial typologies (e.g. mosque, palace, bazaar), or through typologies of ornament (i.e. geometrical patterns or Arabesque), which continues to lead towards pastiche. Second, the proposal will present student work and research that deals with Cartesian lines that are developed through procedural techniques and explicit parametric models. Part three will explore student work and research that is driven by ideas of interpolation of computational splines and material computation that are developed through computational and material physics-based systems.

The aim of this proposal is to highlight the importance of computational attitudes at a time where design in the region is struggling to find its voice. The author believes that contextualizing computational design through a historico-cultural lens will elevate the design discourse in the region, in turn elevating the role in which design can play in building contemporary post-post-colonial societies.

Beyond Digital Steroids: A Pedagogical Approach to Foundation Design Education though Design Robotics  
Nathan King, Harvard Univery, RISD & Virginia Tech  
Jonathan Grinham, Harvard University & SAOAS Design Group  
Stefanie Pender, RISD  
Rachel Vroman, Harvard University  
Chip Clark, Virginia Tech

This paper presents the development and evaluation of analogue strategies for robotic tooling that engage material and process while by-passing the three dimensional modeling environment with the goal of introducing the machine as a design tool that supports, rather than clouds, the development of fundamental critical judgement necessary at the foundation level. Within the context of well-established foundation design exercises, a processing-based robotic programming workflow was created that enables students to translate hand drawings to machine code that can be used to create three dimensional parts with ruled surface geometry. The programming workflow was tested during the creation of physical tooling for kiln-based glass casting thus translating the hand drawings to three-dimensional glass artefacts by way of iterative robotic material manipulation.

Fundamental design education has struggled with the incorporation of digital design and fabrication technology. In many cases the introduction of the ‘digital’ into early design curricula is at odds with well-established pedagogical constructs that develop material understandings of action and result through physical iterative processes. That resistance to non-physical simulated interfaces, devoid of the physical and the material, is warranted, but it should not be so quickly applied to digital material-processing technologies. Those technologies are being increasingly aligned virtual design environments. This perception is exacerbated by the digital interface and modeling platforms that, at the foundation level, offer no connection to material behavior and completely lack the feedback necessary to critically evaluate design decisions outside of the virtual environment thus are incapable of informing physical perceptions. It is the three dimensional digital interface that allows decisions, or rather uninformed actions, to be made with haste and in which loose ideas are transformed into virtual representations of ‘things and stuff’ at an accelerated rate; where at the foundation level a fundamental tactile experience is necessary to understand the world and the consequences of our actions within it.

The industrial robotic manipulator offers the potential for design students to develop a material idea, the tool to realize it, and programmed spatial movements that allow rigorous iterations and exploration of key parameters and variables within a controlled material process. Despite the potential for incorporation at the foundation level the industrial robot is often relegated to advanced courses and research that tend to isolate the tool as an exception rather than a rule of integrated opportunity. In order for the field of Design Robotics to enjoy lasting impact it must become integrated within the fundamental design curricula. The design experiment described in this paper presents a singular example of the potential for the industrial robot to engage material, in a tangible manner, through an analogue design process that provides students with an acute awareness of the consequences of design decisions outside of the simulated digital design environment. Here the robot is a tool by which we realize design ideas within physical material/process parameters and therefore experiments such as these position the robot firmly in the context of foundation design education.
Emergent Models of Architectural Education Continued

Design Research Studios: Data-driven, Trans-disciplinary, Collaborative
Marilys R. Nepomechie, Florida International University
Marta Canaves, Florida International University

This paper presents some of the strategies and proposals produced through an NSF-funded multi-disciplinary academic study of urban resilience in hot, humid, hurricane-prone coastal regions. Focused specifically on the envisioned effects of sea level rise on the natural and built environments in Miami-Dade County, the paper tracks the challenges and opportunities presented by a trans-disciplinary collaboration among scientists, engineers, social scientists and designers, while speculating on some of the opportunities afforded by climate change to critique, rethink, transform our cities—and in that process ultimately improve them. The paper outlines both a nascent pedagogy that seeks to take maximum advantage of collaborative, trans-disciplinary research, and a nascent strategy for the data-driven study of resilience from the perspective of design.

Product of Gilded Age ambitions, the city of Miami was founded in the final decade of the 19th century. Built primarily at—or just above—sea level on a highly porous limestone base; comprised of artificial islands, extensive areas of landfill, and vast terrain re-claimed from Everglades wetlands; the young, rapidly growing, multi-cultural, polyglot city of Miami, Florida is particularly vulnerable to the effects of climate change. Experts predict that over the course of its second century, significant portions of Miami will be substantially affected by rising sea levels. The effects will likely alter every aspect of the urban region. Part of a multi-disciplinary university study on the effects of climate change on our coastal urban areas, this research, funded in part by the National Science Foundation, is a key component of a broad collaboration that includes geographers, climatologists, hydrologists, plant and wetland ecologists, hydro-geologists, biologists, anthropologists, cartographers, infrastructure and GIS specialists—as well as architects, urban designers, landscape architects, policy experts, local agencies, city government and NGOs.

At our university, the potential effects of sea level rise—on the form, infrastructure [soft and hard], organization, and ultimate resilience of the Miami River corridor—have, for the past 2 years, been the subjects of trans-disciplinary graduate design studios in urban design, architecture and landscape architecture. The visioning work produced through these combined efforts has served as catalyst for academic investigation and public debate. We contend that it can inform important community planning that will allow Miami to remain—in the face of substantive challenges—a viable, vibrant and increasingly desirable place to live throughout the coming century. By means of drawings, models, digital data analysis and visualization, and narrative texts, the research, project proposals, and pedagogy presented in this paper expand discussion about the range of possible responses to our environmental vulnerabilities, and about the expanding role of the academy in that process. Simultaneously, they reveal unexpected opportunities to improve an extraordinary urban place even as it builds resilience across a range of fronts.

Intra-Disciplinary Pedagogy in Design: A Case Study for Diversity and Collaboration in a Research-Based Design Studio Agency(ies) of Community Building and Design
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Daniel Nevin Harding, Clemson University
Dustin Graham Albright, Clemson University
Ufuk Ersoy, Clemson University

What can 4 architects, 2 engineers, 2 Ph.Ds, 2 practitioners and 4 academics accomplish when they all together teach a design studio? This paper presents the preliminary results of a Collaborative experience in a Graduate Design Studio with a research component, in which experimentation, innovation, design development and intra-collaboration where key components in the experience. This design studio was carried under the premise that pulling together the talents of the participants will yield a unique educational experience for both the students and team of educators. While students worked individually in their projects, the studio setting was of a continuous collaboration among all students and Faculty.

SETTING
A group of 38 students participated in this design experience. The students were randomly divided into 3 groups and each group was scheduled to spend 3 weeks with one of the professors. Two distinct projects were carried out over the course of 12 weeks, devoting 3 weeks for schematic design and 3 more weeks for design development on each project. Students will spend 3 weeks at a time with one of the instructors, then rotate to a different studio critic. This will give the opportunity for each student to interact with each of the four instructors on a more personalized manner. This also gave the instructors the opportunity to know students individually. With each rotation, each instructor had the chance to re-frame the program according to the student’s need. At the same time the students had the opportunity to learn from each instructor’s design philosophy and develop their projects accordingly.

All projects were developed in a fast-track mode in which each student had 3 weeks to complete a specific cycle in the design process and deliver a result. At the same time, each cycle was intended to challenge the students to make decisions based on the different approaches offered by each of the instructors on that particular cycle.

RESULTS
In conjunction with the studio, a parallel study on the pedagogical approach was conducted under the advice of an independent evaluator. Preliminary results of this evaluation showed major advantages on the perception of the effectiveness of this teaching environment when compared with the traditional single instructor studio. The research also revealed that students in the intra-disciplinary studio where more creative and learned more than in a traditional studio setting. Some results in the research hinted at the perception that some students where less productive in the intra-disciplinary when compared with the single instructor. However this view is contrasted by the critics and final juries where the overwhelming consensus was one of more productivity in a short period of time. Finally the study revealed the need for further research on the pedagogical advantages of the multi-instructor model.

Overall both students and faculty felt that this was a positive educational experience that should continue to be offered and perhaps use as a model for design education.
This paper captures the experience of architecture students from the Global North and local stakeholders in the Global South as together they examined the informal and vibrant urbanism of Alexandra Township, Johannesburg, South Africa during a ten-day community design charrette examining the Alexandra Youth Precinct. The paper discusses the approach, methodology and outcomes from the process; from a methodological, theoretical and pedagogical perspective.

In May 2013, in collaboration with forty local youth and community stakeholders, a team of architecture students from (redacted), launched a programme of constituent-centered action research and design within the Youth Precinct of Alexandra Township. The 5.4 hectare precinct includes multiple community-purposed developments, yet little spatial consideration has been given to the precinct as a unified whole, including its function, circulation strategy or efficacy as a public realm. Furthermore, the context reveals unique urban complexities of contested space, the spatial politics of the legacy of Apartheid, and the challenges of post-colonial development.

This dynamic inquiry examined the following theoretical questions:

- How can one devise genuine qualitative and quantitative research methodologies appropriate for the specific conditions of the South African Township?
- How do the utterly unique social, political and spatial urban dynamics of the Township inform a community design process?
- At what levels of local citizenship and politics can a community design charrette impart change?
- What design outcomes result from this process and might they be successful in this context?

Through extensive quantitative and qualitative research methodologies and rich sharing of personal experience, a mutually beneficial cross-cultural design inquiry emerged. The paper documents the research and design methodology, community design impacts and outcomes, and lessons learned in this collaborative process. The paper goes on to examine consider the emergent urbanism of the Township and its impact upon the constituents and designers engaging such a context. The paper concludes with a set of guiding principles for similar, future community design interventions.

The practice of architecture today occurs at a global scale and must address issues beyond borders and immediate frames of time. Longer term educational programs such as dual-degree tracks provide more international experience and education that may better equip future designers for this demanding and changing environment. These programs look to engage students more deeply from within their respective host countries. This study provides an in depth case study of a dual degree program between Tongji University in Shanghai and the University of Hawaii in Honolulu. It establishes context through a typological assessment of current east-west architecture and urban design exchange programs based on surveys of leading and developing Chinese universities. The following contrasts similarities and differences in specific pedagogy, how pedagogies are reconciled is discussed, and this program’s curriculum are contrasted with traditional and short-duration exchange programs.

While transnational education is not new, Chinese and Western Universities are experimenting with a variety of new, immersive educational models. Though Western curricula have helped shape the Chinese higher education sector, there has always been a greater flow of ‘eastern’ students to the ‘west’. According to the Institute of International Education, in the United States alone 58% of international students are from Asia with Chinese students comprising 60% of that group. This trend is predicted to continue, ostensibly through US policies designed to encourage this flow, however the globally-engaged academic community is also seeing a dramatic rise in non-western universities looking to participate in, rather than just contribute to, these new models. Tongji holds the second highest ranked Architecture and Urban school in mainland China, while the University of Hawaii Manoa maintains a long-established focus on the Asia-Pacific region and is the geographically closest American university to China. Currently in its second year, the Global Track (China Focus) is a new graduate level program that is designed to educate students in a professionally minded and globally aware environment. Over three years Chinese and American students take class and internships together in China, Hawaii and New York with professors from the US and China. Critical evaluation of the program and its experimental curriculum is focused on the challenges it has and continues to face. These include academic concerns that arise in a program comprised of Chinese and American students and communication issues. It also addresses administrative challenges that go into shaping such a program, such as academic freedom and University accreditation.
A Pedagogical Exploration of an Open-Source Architecture Paradigm in the Responsive Design Studio
Susan I. Frostén, Philadelphia University
Jonathan Grinham, Harvard University
Dr. Kihong Ku, Philadelphia University

Open-Source Architecture is an emerging paradigm advocating peer-to-peer collectivity, inclusiveness and participatory culture in architectural design. These conditions support a resurgence of interest in responsive architecture, which has a foundation in the prolific work done in the 70s, 80s and 90s in fields of computer science, product design, network and communications, by individuals including Weiser, Wiener, Ishii, and others. In the last decade, rich participatory, open-source communities, open-source hardware, and open-source software, created by and designed for the fields of algorithmic design, visual programming, and physical computing have emerged with resulting opportunities for change in architectural education.

Processing is an example of an open-source programming language particularly significant for its open and participatory character. It combines an open source software platform with an online community that offers tutorials, code libraries, forums, and wiki pages. Arduino, open-source hardware, often involved in designing and prototyping kinetic and smart architecture – was developed on Processing. Arduino combines the use of off-the-shelf hardware and online community with users contributing to and borrowing from their peers, thus providing a platform for Do-It-Your Selfers (DIY), academics, and professionals around the world. The field of responsive architecture requires multidisciplinary collaboration amongst architects, engineers, programmers, behavioral scientists and other specialists. They can be members of these online communities, introducing a new educational lexicon of posting, googling, hacking and co-creating.

In response, the authors conducted a study to explore the following pedagogical questions:
- How is architectural education changing due to these innovations?
- What are the related research skills and information literacy requirements for students?
- What are the opportunities and challenges for architectural education?

The three-stage study included:
1. Literature review and mapping of open-source communities in digital design;
2. First-hand experiments with open-source hardware and software by the authors through responsive architecture design projects;
3. Responsive design studio course development and survey of student perceptions.

The results from the study indicate that this pedagogical approach offers access to low-level knowledge components, but requires careful integration with critical and theoretical aspects of architecture. Open-source communities can produce an information overflow creating the ‘transparency problem’ – the inability for learners to evaluate the legitimacy of new media they are consuming.

Additionally, five points were derived as design process guidelines:
1. Hacking: this notion contradicts its negative connotation and is used to ‘extend and develop the existing knowledge base’;
2. Off-the-shelf: this approach encourages the use of online user-generated software libraries/source code or standardized off-the-shelf hardware by the designer, reducing the need for reinventing complex code or circuits for entry level users;
3. Simulation: the use of parametric software and algorithms allow the designer to interact and evaluate design through virtual environments and translate to physical computing systems;
4. Digital versioning: algorithmic design, digital fabrication allows evaluation of place sensitive design criteria facilitating mass customization of materiality, tectonic relationships and intelligence;
5. Interdisciplinary blind spot – architects are spatial consultants in the open-source architecture paradigm but need to understand the capacity and synergies of other disciplines in order to manipulate, edit and construct elements of responsive architecture.
Emergent Models of Architectural Education Continued

Pedagogy at Full-Scale
Eric Thomas Nulman, University of Southern California

This presentation will outline an alternative model of pedagogy – Pedagogy at Full-Scale – designed to cultivate a student’s material sensibility in the digital age. Employed here in a studio course format, full-scale exercises have proven to be successful tools in developing the students’ material sensibility; cultivating their ability to employ material effects as a design mechanism; linking the production of atmosphere to the spatial experience; changing the working scale of the creative process; and conjoining visualization and realization into a synthetic process.

The traditional studio working method of designing via small-scale models and 2-D drawings limits a students’ development of their material sensibility. Working with materials in-hand develops a students’ ability to expose a material’s latent potential. By examining the tactile qualities of materials and the immaterial qualities of atmospheric effects, students improve their understanding and appreciation of a material’s qualities, performance capabilities, and sensory affects. Full-scale exercises prompt students to be explicit about the material substance and aesthetic performance of their design proposals. In these exercises the materials used are not abstract or representative of another material, such as the common architectural use of basswood and cardboard, but are the project’s intended materials. Tectonics and geometric forms become linked with a material and its specific attributes. This coupling of materials and tectonics encourages an alternative design process that integrates production techniques and strategies into the creative process towards the realization of the material tectonic and its resultant material effect. Research through full-scale making challenges the traditional working scale at which the design process begins, and the timing in which production techniques and strategies are considered. While studies on urban form, program, and composition can be reduced in scale without compromising their results, studies on materiality cannot and need to be investigated at or near full-scale. Unlike a mock-up that occurs after the design is finalized, the full-scale work here is developed during the concept phase of design. Prototyping investigations completed at the early stages of the conceptual process yield an invaluable opportunity for students to test with their own senses the affective qualities of their material assemblies and make necessary design adjustments.

To explicate the pedagogy, one studio course (an undergraduate studio where materials are introduced to students for the first time) will be examined in detail. The course is structured to allow a deep investigation into two material systems: one focused on structure and the other envelope. Beginning with a case study exercise, students analyze the limits and potentials of their material systems. Understanding and application of this knowledge is demonstrated in the design and fabrication of a full-scale pavilion. After having worked with the material systems first-hand, students are able to employ them in larger project with a public program and urban site. The final project outcomes demonstrate the ends of a pedagogy at full-scale: leaving students with an applied understanding of how a material and its associated systems of assembly can be intertwined in the creative process to generate the performance and experience of architecture.

Working with and for “Others”: Architecture in an Expanded “World”
Sabir Khan, Georgia Institute of Technology

The gap between Architecture’s cultural capital (its currency in media and in theory) and social capital (its agency in the world) has perhaps never been greater. The 2008 crisis and its sputtering recovery once again remind us that while the profession of architecture will not disappear, every boom and bust cycle hollows it out, leaving its associated discipline casting about for relevance and its pre-professional students ever more unsure of what lies ahead for them.

While there is much to be gained from the recent interest in exploring architecture as a “mobile discipline operating on the edges of other barely contained fields” and in “future practice” – an ‘un-disciplined’ frontier where global consultancies like McKinsey get billion dollar contracts to design cities in Saudi Arabia and rogue artists/scientists like Natalie Jeremijenko imagine our urban futures – it does not address how one prepares oneself for this mutable and seductive landscape of the future/present.

It certainly leaves those of us in architecture schools, students and teachers alike, with an ethical conundrum: how to participate in an education process that prepares for, simultaneously, the expansive horizon of future practice and the diminished potential for a career in architecture.

The occluded horizon that exploring architecture in “an expanded field” appears to produce brightens significantly if one looks instead at the potential of architecture in the world, beyond the 2% that the profession currently serves and the curricula that prepare for such a limited remit.

An expanded notion of architecture in the world is neither new nor revolutionary. What is potentially radical is giving an orientation to the world, out there, a primacy that it does not have currently in either disciplinary or professional discourse. Considering architecture, in Latour’s terms, as “matters of fact” and as “matters of concern”, is not just an act of recuperating a critical dimension for architecture. It brings back to visibility a diverse and ongoing set of practices that our curricula barely address and our students barely know: the whole history of socially engaged architecture, of participatory design, of collectives and actions, of the politics and protocols of working “with” and “for” others.

These “other ways of doing architecture” resonate with many of our students for they share with their peers a strong desire to “make a difference”, to “give back” and “do good”. Working with students from different majors – public policy, business, engineering – makes apparent the interests they share as well as the support their curricula provide to encourage social entrepreneurship, social startups, and service through design, a support that architecture curricula limit to a class or two on “community design” or hands-on “design-build”.

Having architecture students mix with their colleagues in a mutual exploration of this terrain has been revelatory. Architecture students rediscover their own discipline and its potential agency. And, perhaps, even more important, they find themselves re-enfranchised, part of a broader community of like-minded peers, citizens, and future professionals, no longer ghetto-ized in the infamous “architecture” building where the lights always are on.
Radical Authenticity
Thom Faulders, California College of the Arts

With the the far-reaching influences of shared resources, commerce, technology, and media, the 21st century city is becoming homogenized into an international array of self-similar hubs. Major metropolitan areas in both existing and developing cities scale-up rapidly via this internationally shared network of imported design, building trades, and global capital. However, rather than reinforcing distinct geographic differences and variations, the open city of today is in danger of generating replicating bland icons of tomorrow through these very flows of exchange.

In light of new building technologies combined with environmental innovations, this paper explores other potentials for localized building processes. This research is founded upon a speculative architecture that is “grown” into place: a bottom-up architectural paradigm wherein its building components are grown rather than constructed; is in continual formation rather than fully completed; and is created locally rather than imported from afar. Radical authenticity can transform untapped regional resources in unexpected ways, creating an open city that is natively informed.

Founded in western Asia, Dubai is best known for its imported architecture and fast-paced expansion, yet these factors challenge its identity for regional urbanism. Paradoxically, the city is situated in one of the most unique natural environments on earth: the world’s highest salinity for oceanic seawaters is found in the city’s adjacent Persian Gulf. Typical salt content for most oceans is 3.5 parts per thousand – uniquely the Persian Gulf is concentrated at nearly 40 parts per thousand. Dubai’s coastal sabkha plains are salt flats created through extreme temperature and humidity, and combined with high water salinity from the gulf, make Dubai unique in its ability to merge sabkha to city.

The proposed process is a new kind of architecture for the open city. With 170 meter tall tectonic mesh and an exposed membrane skin, the vertical planes of the highly visible tower are continually mixed with Persian Gulf salt water via an external vascular water system. As the water evaporates and salt mineral deposits aggregate over time, the tower’s appearance transforms from a transparent entity abandoned it. Rising crime, falling property prices, and vacant commercial needs of its current local residents nor of the public at large, who have both effectively abandoned it. Rising crime, falling property prices, and vacant commercial property characterize the current malaise of this zone, which stands in for many similar areas in quickly growing horizontal low-density cities. It is a political reality to which they were marketed, but now by newer, more diverse generations of inhabitants. These areas do not depend on the nuclear downtown (if it still exists) so they cannot be properly described suburbs. They are our city, yet they are not urban. New techniques must be identified to make these zones relevant to their current residents thus restoring their utility and value. A new complex, layered urbanity must be overlaid upon the simplistic extant forms of the subdivision, the commercial strip, and the arterial road.

Houston Texas is the most extreme iteration of the contemporary American city. Famously, it has no zoning and very minimal ordinances. Harris County, occupying Houston’s periphery, and enabled by two loops of freeways, has even fewer development controls. It displays the results of capital-driven city growth in an even purer form than Houston itself. Harris County is the Wild West – it is the quintessential open city.

My project recounts the history and diagnoses the current malaise of a formerly successful, former edge city in Northwest Harris County: the FM1960 Corridor. Developed in the late 1960’s and 1970’s, several newer layers of edge growth have now surpassed this zone, and it now finds itself within the vast horizontal in-between city. I focus on FM 1960’s commercial strip, which no longer serves the needs of its current local residents nor of the public at large, who have both effectively abandoned it. Rising crime, falling property prices, and vacant commercial property characterize the current malaise of this zone, which stands in for many similar areas in quickly growing horizontal low-density cities. It is a political reality that no solutions to FM1960’s problems can be dictated from above. Consensus must be reached and the resulting change will have to flow from the private sector.

As part of my MS Thesis at the University of Houston, I have joined with local stakeholders, including the Houston Northwest Chamber of Commerce, the commercial property owners’ association and various residential municipal utility districts (MUDS) to identify a way forward that they can get behind and adopt. M.Arch students in my spring 2014 studio at Texas A&M University are currently masterplanning a portion of the FM1960 commercial strip that is held by willing developers, as a detailed test case of my proposition.

I am very excited by the ongoing results of my current research on the periphery of Houston, and I have high hopes that it might make a valuable contribution the 2014 International Conference of the ACSA: Design + Building in the Open City.

What Stand Can Urbanity Take in the Uncontrolled Periphery?
Craig Babe, Texas A&M University

The relentless outward growth of the contemporary American horizontal city is driven and formed by the simple logics of capitalist land development. Public space and sense of place are commodified and imbued with the same built-in obsolescence as any other consumer product. Peripheral areas that have been surpassed by the newer expanding edge are left in decline, used up, and discarded. Yet they are occupied, no longer by the homogeneous demographic for which they were originally designed and to which they were marketed, but now by newer, more diverse generations of inhabitants. These areas do not depend on the nuclear downtown (if it still exists) so they cannot be properly described suburbs. They are our city, yet they are not urban. New techniques must be identified to make these zones relevant to their current residents thus restoring their utility and value. A new complex, layered urbanity must be overlaid upon the simplistic extant forms of the subdivision, the commercial strip, and the arterial road.

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Mass Customised Cities
Tom Verebes, University of Hong Kong

This conference paper speculates upon the ramifications of computationally-driven design and production technologies, whose methods and applications are well-rehearsed in architectural design, practice, teaching and research, yet remain largely untested at the vast scale of the contemporary city. Prototyping methodologies have become increasingly adopted in the making of non-standard architecture at the scale of discreet iconic buildings, interiors and furniture. The main theme to be interrogated concerns the implications of the tools of mass customization upon cities in the twenty-first century. At the cutting edge, and increasingly in the mainstream of architecture, we find evidence of a paradigm shift from mass production to mass customisation. An important paradigm which had emerged as a result of the Industrial Revolution was the Fordist assembly line model of production, which had, in turn, contributed immeasurably to standardisation and mechanisation of cities. Just over a century ago, the German Werkbund introduced a new potential to standardise and repeat components of products through mass production made for mass consumption, relegating to history the notion of the bespoke, on-off product, made by a single craftsman for a single consumer. As an effect of mass production, the industrial city began to take on repetitious qualities, both within a city, and as well, cities began to increasingly share characteristics. The Modernist heritage was upheld by the mass production of architecture, which in turn, had perpetuated a generic approach to city formation and expansion. Standardisation pervades nearly all industries, driven by efficiencies of minimising cost and time, and reducing complexity. Whether one focuses on the architecture of mass housing, or the ubiquity of office towers in CBDs worldwide, it is clear now how twentieth century mass production failed to achieve sufficient variation and differentiation to express the world’s diversity. At the core of the ambition of so-called non-standard design, lies a critique of ubiquity, universality, and monotony, of the modernist industrial paradigm. Cities are inextricably tied to a society’s model of production, and the prevalence of generic urbanism, which can be found anywhere and everywhere, comes out of the legacy of globalised Fordist mass production. Alternatively, mass customization, as a model of contemporary production, aims for non-standard effects of simple parts leading to more complex and compelling wholes.

Today’s design technologies link more directly to engineering, manufacturing, and construction delivery systems, with the potential to create more specific and distinctive urban environments. Taking a speculative position to architecture and the city on the scale of discreet iconic buildings, interiors and furniture. The main theme to be interrogated concerns the implications of the tools of mass customization upon cities in the twenty-first century. At the cutting edge, and increasingly in the mainstream of architecture, we find evidence of a paradigm shift from mass production to mass customisation. An important paradigm which had emerged as a result of the Industrial Revolution was the Fordist assembly line model of production, which had, in turn, contributed immeasurably to standardisation and mechanisation of cities. Just over a century ago, the German Werkbund introduced a new potential to standardise and repeat components of products through mass production made for mass consumption, relegating to history the notion of the bespoke, on-off product, made by a single craftsman for a single consumer. As an effect of mass production, the industrial city began to take on repetitious qualities, both within a city, and as well, cities began to increasingly share characteristics. The Modernist heritage was upheld by the mass production of architecture, which in turn, had perpetuated a generic approach to city formation and expansion. Standardisation pervades nearly all industries, driven by efficiencies of minimising cost and time, and reducing complexity. Whether one focuses on the architecture of mass housing, or the ubiquity of office towers in CBDs worldwide, it is clear now how twentieth century mass production failed to achieve sufficient variation and differentiation to express the world’s diversity. At the core of the ambition of so-called non-standard design, lies a critique of ubiquity, universality, and monotony, of the modernist industrial paradigm. Cities are inextricably tied to a society’s model of production, and the prevalence of generic urbanism, which can be found anywhere and everywhere, comes out of the legacy of globalised Fordist mass production. Alternatively, mass customization, as a model of contemporary production, aims for non-standard effects of simple parts leading to more complex and compelling wholes.

Culture of Mix: Keunseng, A Building Typology for Open City
Sanghun Lee, Konkuk University

Seoul much like other newly developed modern Asian cities, has unique urban qualities that are not easily explained by traditional theories of Western urbanism. Under the presence of an unprecedented intensity and speed of new production and consumption Asian cities are in a state of constant flux without definite form. Scholars and architects have coined terms like ‘generic city’ or ‘open city’ to describe this extraordinary phenomena of Asian cities, with an additional aim to envision the future form of global cities.

Seoul is unique especially in the way it adapts to constantly changing programs. Keunseng, the most common type of commercial building in Korean cities plays a key role in this extreme adaptability. In Western cities, commercial shops are usually placed on the ground floors of apartment blocks. This architectural typology of vertical combination of houses with shops on the ground floor had developed since the early stage in history of Western cities and has maintained until capitalistic metropolis. In Korean cities, however, various commercial programs for urban neighborhoods are packed within a multitistory building called Keunseng, placed at the periphery of urban blocks along the main streets. This is a unique type of spatial configuration of houses and shops in Korean cities. In this respect, Seoul differs from other East Asian cities in China and Japan.

Keunseng is a multitistory frame building, within which almost any urban program from commercial to religious may be adapted. Originally a building for various neighborhood commercial facilities, Keunseng at times even takes the function of housing in the form of Gosiwon. Under the unprecedented pressure of time, speed and quantity, the way dynamic change and mixture of programs take place in Keunseng is very efficient. It is dense and flexible at the same time. With the extreme neutrality, Keunseng works as an efficient tool for capitalistic open cities like Seoul.

Keunseng is a building type never anticipated by western urban theories. Le Corbusier for example, had criticised Parisian apartments with shops on the ground floor as inefficient for the modern city and suggested functional zoning. However he never imagined an independent mixed use commercial building like Keunseng. F. Jameson recently suggested ‘extreme isometric space’ and ‘enclosed skin volume’ as architectural styles for the age of finance capital. He explained that this kind of abstraction might be a form of mediation between architectural aesthetics and finance capital which claims future value through land speculation. In this respect, Keunseng in Korean cities is already a perfect example.

This paper attempts to analyze characteristics of Keunseng as a unique building type for a capitalistic open city like Seoul and to discuss its problems as well as potential. And like the “Culture of congestion” that R. Koolhaas analysed in Manhattan skyscrapers, I would like to highlight the cultural dimension of Keunseng as Culture of Mix, as a negotiated form between architectural and urban tradition of Korea and the logic of capital.
Building the Wind
Stephen Hugh Roe, Feng Chia University
Chiafang Wu

The Open City is a city more open to the vicissitudes of climate and the meteorological. Rather than the conventional architectural strategy of omitting or ameliorating the weather, this paper looks at a design-research and building project over several years which attempts to incorporate the turbulent into the fabric of buildings and thereby to explore the potential atmospheric, perceptual and programmatic effects of such a strategy.

The paper begins by identifying the turbulent not just as representative of the Meteorological but, building on the work of Michel Serres, as an “abstract machine” of change --and, by extension creativity-- in multiple fields. Recent developments in digital culture have allowed some of the wildness of nature to seep into the black boxes on our desktops. But how do we harness that wild energy in design? And, following Serres, is it capable of producing creative insights that go beyond the generation of novel forms? Is the intuition of the shape in the clouds --recognized by artists from da Vinci to Bacon-- a tool that can be brought through design from an initial (fuzzy) insight to a final (perhaps blurry) building?

Key to this process is the increasing ease with which we can simulate the turbulent and its consequent instigation as a potential design tool. Through the activation of the static points of Cartesian space into the dynamic vectors of fluid-dynamic space a transformation in our understanding of the nature or geometric organization takes place. Driven by an underlying abstract-machine of turbulence points are let loose to become the vectors of a transformed space where a nebulous materiality supersedes the certainty of singular descriptive geometry.

This potential is explored through a series of research projects and design studios carried out in schools in London and Taiwan. The atmospheric, and consequent programmatic, effects resulting from this research are explored through several (competition) proposals for large scale public spaces. Finally we look at some built examples which, through either tectonic organization or material transformation, incorporate the changing dynamics of the turbulent into their built fabrics.

Consistent issues which are explored through these examples -both built and unbuilt- are: The process of translation of the non-linear patterns of the turbulent into architecture as a generator of novel descriptive techniques; Progressive orientational variation and the material methodologies of achieving this (connectors, ratchets, bends) are contrasted with static, though perceptually dynamic, material effects (colour, moisture saturation etc.) as potential strategies.

This extended, difficult, sometimes tortuous but nevertheless rewarding process of transformation of an idea through research, design and experimentation into a built result demonstrates how a singular --if eccentric, or even obsessive-- concern can become manifest in different ways across multiple materialities, temporalities and scales eventually becoming manifest in building. In fact it talks as much about the obsessions which drive the movement from design to building as it does about the techniques of that process -- as such it may form an interesting complement to other papers to be presented.

Clues to the Future of Media Architecture
Zhigang Chang

The 21st Century is marked as the period when media and information disburse everywhere, between people and urban architecture as a medium. With the involvement of fast-paced business culture and visual digital media, the public is surrounded by replaceable visual symbols whether watching TV or simply walking on a street. Like it or not, countless images came into the public’s sights in a fascinating speed. While the industrial era was recognized with the theme of substance and material, the post-industrial era is identified as a digital-oriented and image-focused time.

The only thing does not change at present time is CHANGE. The field of urban architecture constantly discovers its new ways and expresses its new ideas as we look into it. One of the cutting-edge areas of the field is to combine media with architecture, which is expected to innovatively integrate the expression of architecture with the way of how other media do.

Over the past decade, architecture façade and the art of image-based digital media experienced unprecedented development, which is considered to the consequence of continuous development through mutual influence of frontier exploration, postmodern consumer culture and contemporary art.

Media architecture is a novel architectural form with the combination of architecture façade and image-based digital media. To some extent, media architecture is an art work features with science and technology. Apart from the fundamental field of architecture, media architecture also pertains to various field including visual communication, advertising planning, art of film and TV, media art, installation art, experimental animation, digital intelligence, semiconductor lighting, green energy, etc.

Media architecture should not only be a visual performance, it should also be a connection that can effectively organize the whole urban space, so as to achieve the purpose of comprehensive communication. Media architecture can contain both real space and virtual space, which is its most extraordinary feature. By blurring the borders between space, the communication of people and architecture can reach a new level.

This article explores how media architecture develops in five aspects as followed:

1. The media attribute of architecture and its evolution.
2. Architectural logic and the evolution of architectural aesthetic.
3. Concept and the evolution of visual arts.
4. The needs of intelligent city and the role of media architecture in the future society.
5. The reform of architectural education.
Accidental Yet Transformative: The Significance of the Bigness of the Turbine Hall in Tate Modern
Yoonjeong Shin
Jin Baek, Seoul National University

Architects are not solely responsible for problems in the built environment (Thorpe & Gamman, 2011). Other stakeholders must also be part of the solution as well. Long-term successes in sustainable development are rooted in local communities, and rely on community assets, skills and agency (Kennedy, 2004). But, architects can be catalysts to spark a positive reaction in willing communities (Peterson in Bell & Wakeford, 2008), and through well-considered partnerships and interventions, humanitarian architects can effect significant change. “Catalytic architects” could describe those designers that seek to enable positive community change in an ongoing way. A catalyst is a substance that enables chemical change without itself being changed. Through catalytic approaches to the work of humanitarian architecture, the profession can conserve human capital and more likely achieve the levels of global solution needed.

Once it is clear that agency, control and responsibility lay in large part with the local community, designers can act more strategically and avoid wasted effort. Local social, physical, and knowledge assets can be maintained, grown and replicated through long-term associations. Given the pace of social and environmental trauma, this will only be possible through a comprehensive and holistic approach (Cousins, 2013). This paper describes some of the issues and provides recommendations for the profession and academy for effective learning and work in the field of humanitarian architecture.
Ingestible Cities
Donna Kacmar, University of Houston

What does a city sound, smell, and taste like? How does the air, water, food, and sonic environment in cities determine our health?

This paper will explore six cities in Asia: Tokyo, Kyoto, Beijing, Shanghai, Bangkok, and Hong Kong and speculate on the relationship between air, water, food, smell and sonic environment and more standard measures of urban health such as longevity, disease, density, and walkability.

Each ingestible item will be mapped so we might speculate on how these issues beyond the control of most citizens or architects are influencing human health.

Air will be mapped by pollution sources and air quality indexes. Water quality and food sources will map the taste of the city. Olfactory categories of minty, floral, ethereal, musky, resinous, foul or acrid will be identified and located; likewise sounds can be mapped by source and intensity. This paper and accompanying graphics will present the ephemeral map of each city.

Geographies of Consumption
Micah Rutenberg, Woodbury University
Mark Stanley, Woodbury University

The 21st Century urban subject is not limited by discreet physical geographies but rather dispersed through digital networks and fluid economies of desire. The 21st Century City, meanwhile, has developed a series of territorial and constitutional response mechanisms to those new subjectivities—new ways it organizes, develops, and values. The evolution of The City is producing tethers and extensions that move urban processes far outside of what could ever before be considered “The City”. These new, expanded constitutions of the city are made most vivid, as they always have been, by networks of consumption and production—from online purchases to millisecond trades to special conditions of importation and exportation. This is The Urban Condition—an expanded network of virtual and physical subjects across dislocated territories, tied not to the city itself but to all the conditions the city makes possible. Urbanity is a condition, rather than a place, and the city must reach far beyond its jurisdictional borders to gather its identity. Using three key case studies, we argue that highly-digital and immaterial processes produce very concrete and territorial ramifications amongst urban spaces and infrastructures, specifically related to the conception of The City in a digitally networked 21st Century.

INFRASTRUCTURE OF EXCHANGE:
The logistical engines of Amazon.com radically reconfigure the traditional model of the economic enterprise: At the same time Amazon replaces the architectural storefront with a digital one, it also gathers and distributes material goods in strategic locations. Amazon’s large warehouses—or Distribution Centers—staged at careful, very-locatable places on the planet represent the city as an extended network of consumption that continually gathers and distributes material goods.

SPEED OF EXCHANGE:
In the Wall Street model of instantaneous algorithmic trading, practices and spaces of exchange are transformed via the speed of computing. The substructure of global capital is reconfigured as a fluid medium, questioning the fixity of The City. Dispersed global actors are able to participate in real time, across vast geographical distances. The space of their interaction is the hardware through which the exchange takes place (the server room, the flesh body trader, the console, etc.), importing and exporting value across physical boundaries. This scenario forms the urban moment; the new fabric of The City.

REACH OF EXCHANGE
Special Economic Zones act as territorial exceptions, allowing for performance and practice beyond the typical bind of urban codes. While the physical infrastructure of the SEZ is fixed, it forms part of larger mobile infrastructure of material and non-material goods. The location of the SEZ and its geography are only in service of being able to physically close, via borders, while simultaneously opening to material and non-material possibilities otherwise not afforded by The City.

Each of these examples highlights a proclivity toward specific locations on the globe as having an urban agency, even though those locations may not be traditionally valued by The City. This breed of urbanism sees the value of territory differently, emphasizing infrastructure, architecture, and other areas of the material world in new and unexpected ways that challenge traditionally figured ideas of The City.
Heat, Air and Life: Thermodynamics and Use in Building Environments
Stephen Hugh Roe, Feng Chia University
Chiafang Wu

This paper looks at a new and relatively unexplored convergence of technology and lifestyle, through the medium of architecture, as a result of the increasing “thermodynamicization” of space in the contemporary post-industrial city.

The paper begins with a clarification of the extended concept of the Thermodynamic as a cultural (rather than just technical/scientific) phenomenon, drawing on Michel Serres’ analysis of Turner’s paintings as portraits (and also instigators) of the new, Thermodynamic Age in which he lived (the age of steam and iron, coal and heat). We then look at how the thermodynamic is today extending beyond the previous boundaries of the industrial machine to permeate the whole of the (post-industrial) city through the increasing emphasis on fine-tuning the thermodynamic performance of microclimates (both internal and external) of the built environment.

As we become more sensitive to this regime it becomes increasingly apparent how patterns of use and lifestyle emerge from our subconscious, corporeal understandings of the subtle climatic variations within buildings and the city which are intimately understood and adapted to by us, as occupants.

An overview of recent examples from practice reveals how, increasingly, an acknowledgement of thermodynamic performance early in the design stage demonstrates the importance of non-optimal, but managed, differentiations of localized microclimatic conditions in defining conditions of use. Here, in addition to the use of new technologies of simulation to analyze buildings during the design phase, we are beginning to see the deployment of such technologies to predict and adapt to actual occupation of space and to allocate function accordingly. Lifestyle and technology are integrated into a projected seamless whole through the interface of simulation.

We look at how these developments result from new ways of working with technology on the part of architects and engineers, particularly the use of thermodynamic simulation technologies in the design stage and their combination with newly flexible design techniques, such as parametric modeling, to allow an increasingly precise control over the localized thermodynamic performance of the built environment.

Finally we talk about two recent design projects for the Sub-Tropical climate of Taiwan which extend this way of thinking from a reactive analysis of the already-designed to a proactive part of the design process where buildings and landscapes are modeled to simulate conditions and are then adjusted to distribute variable conditions over time and space in ways which might encourage, though hopefully not prescribe, programs to emerge through spontaneous activity or curatorial invention.

As simulation techniques become more available to architects and the means to adjust and fine-tune models becomes easier, the thermodynamic becomes a way of conceiving the city and the building not just in terms of their physical form but also in terms of their operation -not so much as the prescriptive “machines for living” of Modernism but more as predictive and dispersed mechanisms for producing variable climatic “affordances” for human activity to take place, activity which is not prescribed but emerges as a result of interaction between human desire, atmospheric conditions and the technologies to achieve them.

Crafting Eclipses: Integrating Computational Design and Automation through Programmed Craft-Based Fabrication in the Developing World
Nathan King, Harvard University, Virginia Tech & MASS Design Group
Jonathan Grinham, Harvard University, Virginia Tech & SAOAS Design Group
David Saladik, MASS Design Group
Alan Ricks, MASS Design Group
Michael Murphy, MASS Design Group

Nearly four years after the devastating 2010 earthquake Port-au-Prince remains vulnerable to disease and a recent Cholera outbreak, has killed over 7,600 people.

In the developed world, advanced design technologies have led to new territories in design exploration and enhanced architectural potential. In the developing world, however, the opportunity for computational design and fabrication to improve the built environment and build requisite social capacity is not fully understood. In developed economies, the integration of digital design-to-robotic fabrication workflows provides unprecedented opportunities to increase building performance and expand design potential. In these scenarios, increased labor costs often support the demand for automation and, even through digital mechanisms; highly individualized building components are often not feasible. The same computational strategies are potentially viable in the developing economies where the demand for high performance buildings, and specifically healthcare infrastructure is great. This research explores the feasibility of technology transfer of computational design and automation strategies between developed and developing economies through the translation of an integrated digital design-to-robotic fabrication workflow to a field-appropriate digital design-to-programmed fabrication process of a performance-optimized façade system containing 8000 individualized apertures in Port-au Prince Haiti. Programmatic considerations were used to identify localized lighting and privacy needs to drive aperture differentiation and a custom folding strategy was developed to enable localized customization. Working in collaboration with local metal craftsmen an automated robotic-fabrication workflow was translated to an in-situ digital design-to-fabrication process through the lens of craft-based fabrication an opportunity is presented to both increase building performance and safety while also investing in sustainable local capacity by embracing locally available skills and materials.
Emergence of Anecdotal ‘Moment-Spaces’ in Contemporary Cities
Jae-Sung Chon, University of Manitoba

This paper will review and discuss the rise of anecdotal moment-spaces within contemporary city. In forms of independent coffee shop, general stores, curated content shops, event venues and so on, these quasi-public/private spaces are filled with ‘personalities’ and ‘stories’. In contrast to the conventional urban spaces, often overburdened with maintaining their semantics, these ‘grass-roots’ spaces cater to ‘operative/performative values’ articulating short-stories and memorable small-encounters, rendering urban pixels within our urban experience. Further, the aid of ubiquitous social media, including Facebook and Instagram, allows these anecdotal pixels to become a networked partial-stories, a quasi-urbanism.

This paper will review and discuss: varying forms of these kinds of space; the spatial, formal, and operational characteristics; the specific urban dynamics they render; their anecdotal nature in contrast to the semantics of urban spaces; their inter-connections with the ubiquitous social media culture. The paper then will articulate its position in relation to the ideas of ‘spontaneous urbanism’ and ‘instant urbanism’. Finally, the paper discuss the spatial, formal, and operational opportunities offered by these anecdotal moment-spaces within our contemporary cities, and the possibilities of reshaping our conceptions and practices of urbanism, towards anecdotal moment-spaces over semantic overlays.

Keywords: urbanism, contemporary city, social media, anecdotal space, semantic space.

Architecture in the Mediated City
Jason Crow, Louisiana State University

"[P]eople in the Valley have coined a term for the weird, half-conscious expression that Google Glass wearers get on their faces when they are concentrating on doing things with the tiny little screen inside their glasses. They call it "glassed out," which you would use in a sentence like: "Barry." "Barry." "BARRY!!" Oh, nvm, he's glassed out, that explains it, ok." I love it. I love how it sounds so cyberpunky, so disturbingly druggy... Future starts now."

Given the ecstatic glee with which wearables—computational devices which gather, process, coordinate and display information about our selves and the built environment we navigate—were highlighted at this years Consumer Electronics Show (CES 2014), our connection to our future and the future of our cities—the post-industrial, post-historical, global urbanity—has finally arrived.

But, love it or hate it, Project Glass fails to create a novel experience of the city. The device’s promise of changing the world by knowing oneself, one’s place in the world, or even of simply having a good time rings a bit hollow. There is nothing new in being a glasshole, and even before Google’s augmented reality device shipped, it struck a nerve. Some sacred public trust has been violated. Glass expands the present to include future, but ironically, the future made present does not appear for the user. Being face to face with Glass makes our own catatonia appear. Our global cities are already a failure.

If Glass, the augmented reality device of the moment (well... at least until CES 2014), fails to offer a new experience of self and city, it fails precisely because the future it is supposed to represent—the open and post-industrial one—has been here with us for some time. We are already glassed out, disturbingly drugged, but Glass is not cyberpunk.

Vilem Flusser, the Czeh-born philosopher and media theorist, would have commented that despite its complexity Glass, and the vision of the city with which it coincides, is functionally simple in a way that denies creativity and renders users into stultified idiots. Following Flusser’s intuition, this paper will first critique the open city as a image, which glosses overs its prior mediated condition, and then will turn to an analysis of temporality in the work of photographer Adam Magyar to suggest how technology can be approached in functionally complex ways to open up new experiences of the city.
Mecha Urbanism: A Postphenomenology between Cities and Cooperatively Autonomous Technologies
William T. Willoughby, Kent State University

“The only perfection which modern civilization achieves is mechanical; machines are magnificent and immaculate but the life which serves them or is served by them isn’t magnificent or shiny or more perfect or more come-
ly.”—Karel Čapek, ‘Letters from England’ (1925)

Drones (UAVs), autonomous vehicles (driverless cars), iOS Siri or Jellybean’s Voice Search, apps that employ GPS (locative media), trending forms of social media, and ubiquitous computing are altogether (and all-at-once) transforming our cities as rapidly as streetcars, radio, and automobiles did at the turn of the pervious cen-
tury. This paper explores today’s technological bonanza as devices develop greater autonomy and impact our cities.

The essay approaches urban space and technology through a postphenomeno-
logical framework derived from the philosophy of technology presented over the
last three decades by Don Ihde and others. In a Banhamesque manner, this paper
looks at the technoscientific near future rapidly at work transforming our defini-
tion of city life. The essay speculates on the various directions and urban manifes-
tations that these new media will take on in the immediate future. Today, archi-
tecture constitutes just one kind of media vying for our attention along with art,
extertainment, broadcast media, social media, and all forms of digital technology.

Information is no longer stored in files on a passive, stationary system. Instead, in-
formation today has become active and kinetic, locative and distributed, dynamic
and interactive. Access to information has become our environment, and within
a few decades, that information will become mobile itself. Ubiquitous comput-
ing, driverless vehicles, civilian drones, robots, digital sensors and surveillance
systems, urban operating systems, expansive data sets derived from social media,
and growingly articulate and globally-trackable supply chains are transforming our
very definition of the city. New technologies and rapidly evolving media constitute
a new kind of urban habitat. What effect will the introduction of drones, robots,
and autonomous cars have on cities in the near future? How will cities change
when drivers no longer pay attention to the road? What form will the city take
when the city itself is capable of paying more attention to us than we pay to it?

This essay describes the contemporary city and its most recent technological en-
hancements through a postphenomenological framework in order to gain a better
perspective on the emergence of non-human intelligence and the rapid evolution
of cooperatively autonomous machines deployed in our cities and our daily lives.
Postphenomenology acknowledges the interdependencies at play between sub-
jects, objects, and the contexts in which they interact.

Postphenomenology begins with the assumption that our perceptions are not just
embodied but that our perceptions are also extended by and into the technologies
that we use to navigate and acquire the world. This essay offers discrete examples
found in East Asian, European, and North American cities where transformations
within these new social (embodied communities), technological (cooperatively
autonomous mecha), and infrastructural (urban contexts) conditions exist today
and how the interaction between these three conditions can lead to new ways of
conceptualizing the city.
Urban Environments + New Regionalism: Interventions for Public + Private Spaces
Margaret Crawford, University of California, Berkeley
Inha Jung, Hanyang University

The Politics of Public Places in Dhaka
Adnan Morshed, Catholic University of America

By focusing on the capital city of Dhaka, Bangladesh, this paper raises broader questions concerning urbanization and, more specifically, the nature of public places in developing economies. A quintessential example of Third-World urban hodgepodge, Dhaka brings to the fore a representative spectrum of urban challenges faced by developing nations that are transforming from an agrarian past to an industrial future without a socio-historical awareness of what it means to be urban. Like other emerging megacities (according to the United Nations Center for Human Settlements, megacities are “urban agglomerations” with more than 10 million people) of the world, Dhaka has been growing with a paradoxical effect: an unprecedented urban development at great environmental costs. This type of urban growth presented contentious debates not only on urbanization, but also on the questions of modernity and progress. If modernity is, as Marshall Berman articulated, “a paradoxical unity, a unity of disunity [that] pours us all into a maelstrom of perpetual disintegration and renewal,” Dhaka city appears to be an emblematic modernist narrative in which optimism and pessimism, resilience and dysfunction, the spaces of affluence and poverty could not find a more fluid coexistence. “Howl,” American poet Allen Ginsberg’s existential angst over the hyper-modernity of 1950s New York, could be an apt description of present-day Dhaka. Ginsberg’s modern metropolis was hardly a wasteland, but rather a battlefield where the social, cultural, and economic forces of modernity engage in an epic struggle.

In this urban “struggle,” Dhaka’s public places are often relegated to mere footnotes in the official vision for economic growth. Uncontrolled gentrification sucks all open spaces into a dizzying vortex of the developmentalist project. This pattern of urban expansion has ironically been facilitated by a historical lack of policy emphasis on public places as democracy-building and livability-enhancing entities. Neither the Mughals nor the British colonial administrators—who together ruled the country for over three hundred years—invested in the city’s public places, for such places were seen either as threats to the authority of the ruling class or insignificant for an allegedly swampy outpost at the eastern edge of their empires. The modern times not only continued to bear the environmental costs of the city’s faulty urban DNA, but also exacerbated the problem. The task of this paper is twofold. First, it examines the political and historical roots of the lack of public places in Dhaka. And, second, it presents on-the-ground challenges of designing public places, based on the experiences of an undergraduate urban design studio offered at the BRAC University in Dhaka in 2012. One of the guiding hypotheses of the studio was that the task of creating sustainable public places in cities of laissez-faire economic modernity ought to follow a process of “unlearning” a priori Western models of urban design. Dutch architect and urban theorist Rem Koolhaas, who found in the Nigerian city of Lagos “a protean organism that creatively defies constrictive Western ideas of urban order,” offers useful insights into this process.

Dubai, City of Desire
Eirik Heintz, American University of Sharjah

Over the past two decades, Dubai has aspired to build a premiere global city with a strong regional identity. Dubai markets itself as a crossroads between East and West and is known for having the tallest building in the world, man-made islands in the shape of palm trees and numerous other projects aimed at establishing its global significance. The amount of money that is being spent on urban projects and infrastructure by the Dubai government is astonishing. What is perhaps most significant about the Billions of dollars spent on the development of the city is that Dubai is being developed primarily for non-citizens. The local Emirati population makes up less than 20% of the total population. Dubai is a city of expatriates and tourists with a population that is constantly in flux. It is a city of “others among others.”

This paper will explore the established and developing urban fabric and architecture of Dubai that addresses its unique post-modern global character. It will focus primarily on the development of Downtown Dubai where the concentration of tourists, expatriates and locals is at its most diverse. It will examine how local cultural norms are being accommodated and how cultural interaction is being fostered through designed environments that provide a neutral ground for consumption and leisure.

At its heart, Dubai aims to be a modern city. Yet in “The Old Town” area of Downtown Dubai, the architecture seeks to address an identity that references a romantic vision of the past or the embodiment of the exotic. Although artificial, many urban developments in Dubai evoke this Orientalist narrative for the benefit of both the visitor as well as the local. This narrative is often juxtaposed to the contemporary architecture that would be typical in any modern city. As locals and visitors move around Downtown Dubai, they experience a constant shift between past, present and future. This shifting is reinforced by the architectural identity of “The Old Town”, Burj Khalifa, Dubai Mall and other places that make up various fragments of Downtown Dubai. In a traditional city these developments would have been built over a long period of time. In Dubai, all of these developments were designed this way and built within a period of 8 to 10 years. The paper will conclude by examining how the heterogeneous nature of the Downtown Dubai development and its population address the contemporary global citizen who easily shifts from one context to another and from one identity to another.
Mapping the Elastic Public Realm
Andres Sevtsuk, Singapore University of Technology and Design
Onur Ekmekci, Singapore University of Technology and Design

The perception of urban environments is as much influenced by the structure of public space as it is by the privately controlled building interiors that often extend the publicly occupiable realm deep into their interiors, lining outdoor spaces with eyes, views and merchandise. In mapping urban space, there is a deep-rooted tradition, however, to clearly differentiate outdoor and indoor spaces of a city. Urban design plans typically mark buildings as solids and render space between them as void that members of the public can occupy within allowable limits. Building interiors, which form the origins and destinations of most urban movement, are usually not part of the picture.

Revisiting a tradition of mapping the public domain of the built environment, our work builds on the shoulders of Nolli, Sitte, Anderson, and Habraken to investigate mapping and analysis techniques that capture the inside and outside spaces of the public domain in a continuum. Bridging morphological mapping with recent network analysis techniques in GIS, we explore how urban fabric can be represented with four complimentary layers of information: 1) the ground-floor structural plans of buildings; 2) the publicly accessible pedestrian circulation routes on all levels; 3) the functional characteristics of spaces on all levels, and 4) the degree of public accessibility of different spaces. We use the proposed representation in detailed surveys of similar-size samples of urban fabric in two contrasting areas of Singapore – Bugis and Punggol. Bugis is a popular retail district near downtown; Punggol, is a recent residential new-town on the periphery of the island state.

A comparative analysis of the areas reveals that publicly accessible space extends well beyond the streets in both areas, with 40% of the 242.7 linear kilometers of public circulation routes in Bugis located indoors, often several levels up. Many routes cut through buildings to shorten the walk or to cool the traveler down in air-conditioning. Our Bugis study area, sampled from one of the most intense urban environments in Singapore, has a total of 696 buildings, 4,952 ground-floor building entrances, 3,435 businesses and 2,500 dwelling units within a 10-minute network walking radius (600m) around the Bugis MRT station (an area slightly less than a square kilometer in size). A similar-size study area of Punggol has a total 77.9 km of publicly accessible walking paths, with only 8% of them located inside buildings. There are a total of 293 buildings, only 434 building entrances and 133 businesses, but 14,955 dwelling units in the study area. A comparative analysis of the two areas not only reveals their nuanced spatial and functional differences, but introduces an open-source archive of highly detailed 3-dimensional GIS data on samples of contemporary urban fabric that can be used and extended by researchers around the world.

Post-war Beirut: Interventions for Public + Private Spaces
Elizabeth Martin, Southern Polytechnic State University

Sprawled on the hills that roll down towards the Mediterranean, Beirut was once known as the “Paris of the Middle East.” The urban fabric and culture of Beirut evolved under the influence of many different civilizations, such as the Greeks, Romans, Arabs, Ottoman Turks and French. The war, however, has changed the demographics of the city, Beirut’s once mixed religious and ethnic neighborhoods have become increasingly divided and hundreds of thousands of people left the country. Today, the legacy of the civil war still mars Lebanon’s divisive and turbulent politics, but the city itself, it seems, has moved on.

Beirut’s endless capacity for reinvention and transformation is best observed in its city center. This pivotal district has known many public spaces and urban forms as it has historic lives. The medieval bourj for one, the Ottoman provincial port another, then the French colonial ‘Places des Canons’, and lastly the independent ‘Martyrs’ Square’ (Sahat al-Shuhada), which today has been succeeded by an ultra-modern global cityscape. The most recent re-imagining, a consequence of fifteen years of devastating civil violence and self-destruction (1975-1990), preceded by twenty years of futuristic urban landscaping,(1) has become both a symbol of Lebanon’s national recovery and a source of its post-war critique.

The work of Lebanese artist Nada Sehnaoui tackles the contested issue of public space in post-conflict urban environments with a meditative aesthetic that engages forms of repetition. The artist work communicates directly to the audience by essentially turning public spaces in cities, into free meeting spots for people. Sehnaoui often fills vacant lots in the downtown area of Beirut with hundreds of repeated items, be they toilets or stacks of paper, and encourages viewers to reflect on how the space is being, and has been, used through their engagement with these often idiosyncratic objects.

Although it is a contested city, Beirut encapsulates many places, which are filled with memories and nostalgia. Studio Beirut’s, ‘The Lost Room Project acts as a multi-media memory blog, highlighting city specific incites and personal narratives of random Beirut citizens.(2) Divided into the categories ‘romance’, ‘heroism’, ‘childhood’, ‘encounters’ and ‘escape’, these public places were recorded, tagged in the city and put on display. One example entitled ‘under the bridge downtown’ is the site for political sit-ins and public discourse.(3)

The research moves beyond conventional urban studies that present the physical fabric as an objective fact: equally and identically accessible to everyone. Rather, I plan to consider the jurisdictions that govern these spaces, the social conventions that animate them, and the different ways people interpret and attach themselves to public space. Further, by playing these sources off textual documents that disclose the perceived priorities of the city’s diverse social actors, I hope to expose and thus illustrate an understanding of the complex meanings, interests, and power relations, now embedded in the urban public and private spaces of post-war Beirut.
Urban Environments + New Regionalism Continued

Study on Regeneration of Downtown Area through Riverfront Development as Urban Catalyst: Case Study of Tokushima City’s Regional Resource: Shin-Machi River’s Frontage Development
Takafumi Arima, Kyushu University
Koichiro Aitani, Texas A&M University

Catalyst is originally a chemical term which activates chemical actions and reactions. In terms of Urbanism, the term, “Urban Catalyst” stimulates the built environment for the improvement of an existing city. The elements to act as a catalyst are defined physical elements such as buildings, open spaces, and the temporary buildings in various scales, and broadly non-physical elements such as festivals, events and even community developments could be considered to make a significant influence to a transformation on the built environments.

The essence of “Urban Catalyst” is to create a new space within a city while maintaining an existing context. This method is quite different from the ordinarily redevelopment such as “Scrap & Build” approach while economy is also booming. As it is said commonly in Japan that Scrap is totally wipe out the existing context (Street pattern, Road networks, etc.), and Build is to set up a new frame work for motor vehicles not for pedestrians, and often the case, cozy pedestrian friendly built environment is replaced to a massive and functional super structured environment.

This method was not so bad, when economy is booming and to accommodate rapid population growth, etc. In this paper, the downtown area of Tokushima city was chosen as a case study and discussed about the Shin-machi board walk along the River, and its effect to the city. Various communities have been developed for participation to utilize and improve open spaces along the river. These public involvements were summarized sequentially, and chained effect of Catalyst is analyzed. The benefit of this research is to find out the theory of “Urban Catalyst” for urban regeneration in a shrinking society.

Infrastructure as a Transformative Cultural Project in the Post-industrial City: An Emerging Paradigm for Public Space in Suzhou
Yong Huang, Drury University

Infrastructure has emerged as a cultural project within the contemporary discourse on urbanism. Today, spheres of urbanistic action, as we have recognized, are determined more by urban participants than by physical urban form; how does infrastructure -- as an ontological practice and a spatial concept in the Heideggerian tradition -- culturally frame urbanistic actions and contribute to interventions for public spaces in the new post-industrial world?

Suzhou -- the “Venice of the East” -- is paradoxically and uniquely emblematic of both the cutting-edge high-tech industrial parks and the best preserved historic city in China. Taking Suzhou as the model for post-industrial cities in China and beyond, this research examines urbanistic potentials that interface with modern and traditional infrastructures, and projects a vision of infrastructural elements not only as ubiquitous networks forming the visible and invisible foundation of today’s new post-industrial world -- dominated by the placelessness of homogenization, delocalization, and dematerialization -- but also as cultural products and generators of new public spaces rooted in regional culture.

In Suzhou, traditional perceptions of public spaces and ideologies of spatial relationships pose heightened potentials for transforming utilitarian infrastructural elements into culturally framed projects for public spaces:

1. Traditionally, public spaces in Suzhou were primarily experienced along linear elements of the city such as streets and, especially, ancient canals, including the “Grand Canal.” The culture of public spaces thus evolved in ways that coincided with the culture of streets and canals. Urbanistic and cultural interventions along countless underused industrial park canals -- including interfaces with streets and overpasses, pedestrianization, and staging canal festivals -- will trigger diverse urbanistic programs that shift the patterns of public spaces from their current focus on modern squares and parks to a new semi-autonomous field centered on once-marginal infrastructural elements.

2. Public spaces in traditional Chinese cities are often perceived by westerners as formless, particularly at the human scale -- the by-product of the thousand-year feudalist past that privileged hierarchical city form only in its totality. Authoritarianism, however, cultivates micro -- freedom, flexibility, autonomy and independence -- qualities associated with rich cultural identities and opposed the banality and placelessness of modernity. Locals find their public domains in interstitial spaces between gated communities and factory compounds, optimizing and diversifying the potentials of infrastructure’s urbanistic functions.

3. In contrast to modern western concepts, there is no dichotomy between nature and culture in ancient Asian civilizations. Natural elements and cultural practices were blended in sophisticated ways exemplified by the Suzhou Classical Gardens. Emerging and informal cultural, commercial, and leisurely programs, supported by local utilities and paths, will loosely form new networks that overlap and mix with ever-growing eco-corridors, and connect isolated, exclusive, and gentrified modern parks. This process will generate holistic and inclusive parks and open spaces that are truly public.

Urbanistic infrastructure -- as an ontological practice -- has complex spatial, temporal, and cultural qualities that interact with emerging urbanistic dynamics. Consequently, design interventions -- operating on infrastructural systems -- are transformational forces for the democratization of public space, allowing cities to transition to new post-industrial conditions, meanwhile, preserving and diversifying their cultural identities.
Urban Environments + New Regionalism Continued

A Guide to the Dirty South: Atlanta
Jennifer Bonner, Georgia Institute of Technology

In 2013 fourteen graduate students looked closely at the city of Atlanta. Positing as editors to a guidebook, these misbehaving designers assert strategies for a “dirty south regionalism.” The paper will both expand upon this prior research and make an argument for architecture of the Dirty South. “A Guide to the Dirty South: Atlanta” is the first in a series of research studios and guidebooks to make a close reading of cities otherwise deemed “backwoods” for a lack of architectural heritage with aims to uncover a history of urban patterns and architectural typologies distinctly born in the American south.

East Coast, West Coast
In the mid-nineties two hip-hop scenes emerged, marking the start of what would be known as one of the biggest rivalries in the music industry. In New York, artists were known as “lyrists,” while the west coast, represented “the real.” With all eyes on the east-west battle, down south in Atlanta, hip-hop collectives Goodie Mob and Outkast formed the Dirty South. Originally perceived as outliers, the Dirty South ultimately became the “third coast” as their record sales exceeded the NY-LA powerhouses. Recognizing the well-established theories in architecture of the east coast and the formal investigations of the west coast, the original research premise asked students “what is architecture of the Dirty South?”

Role of the Guidebook
Far reaching and never neutral, guidebooks possess authority—“go here, eat this, and see that...” Beyond the power of persuasion associated with such a medium, there is a lineage of architects who have closely looked at cities to develop new ways of making architecture. Never considered “guides” by their authors, these precedents include “Learning from Las Vegas” (Robert Venturi, Denise Scott Brown, & Steven Izenour), “Everyday Urbanism” (Margaret Crawford), “Reyner Banham Loves Los Angeles,” and Koolhaas’s “Delirious New York.” Finally, the paper will demonstrate how traditional chapters in a guidebook—accommodations, parks, landmarks, shopping, and attractions—might reclaim a regional identity, especially in a city such as Atlanta.

Dirty South Regionalism
As a former student of Samuel Mockbee at the Rural Studio, I witnessed an earlier version of regional architecture firsthand. Pitched roofs imitating barns and sheds found in the rural south were direct reinterpretations of vernacular forms. Not dissimilar to the work of James Stirling in England (or Leon Krier in the European city model), this previous discourse on regionalism was based upon stylistic copying of the immediate context. This paper seeks to redefine a regional identity, not by reimagining the vernacular, but by creating new architectural hybrids—layered with programmatic types and narratives. The work included in the guide is idiosyncratic and seems awkwardly “backwoods” but points the architecture discipline toward a long overdue reading of Dirty South regionalism. Part tour guide, part conversation, the editors also ask Denise Scott Brown, John Portman, Mack Scogin, Merrill Elam, and Goodie Mob to reflect on Atlanta’s idiosyncratic architecture.

The Ark: Grafting Productive Programs onto Contemporary Waste-space
Caryn Brause, University of Massachusetts, Amherst
Carey Clouse, University of Massachusetts, Amherst

As Americans look for ways to meet emerging challenges of resource scarcity, cities and towns across America will need to evolve to meet the hyper-local consumption demands of their own population centers. Civic and social life will also adjust to new norms around self-provisioning and animal husbandry. While food production has effectively become outsourced from the contemporary city, diminishing energy reserves in the future will prompt a return to local agricultural systems.

This paper documents a research and design project that foregrounds several key design considerations for the future city: the expanded role of animals, the necessity for communal spaces to share knowledge, tools, and materials, and the waste spaces that can be appropriated for that purpose. In doing so, it critically considers how we can prepare future design professionals to propose architectural and landscape program types that have yet to be invented, to opportunistically graft these programs onto local underutilized sites, and to optimistically frame every project with a lens that anticipates resource scarcity.

This project posits that such content represents the center, rather than the margins of future practice. As a model for the new professional norms that will emerge to respond to the pressures of resource scarcity, the studio structure privileged flexibility through hybridized modes of production. Combining research with fieldwork, theory with digital fabrication, and individual design with team think tanks, it investigated collaborative practices to build competencies necessary for resilient response.

The studio research documented several of the most ubiquitous underutilized spaces in the United States, using two historic Massachusetts towns as case studies. Amherst has an urban historic center with strong development protections, while Hadley comprises a farm community expanding its tax base through big-box development. Together they provide ample opportunity to document suburban and urban waste-space varieties including Urban Infill sites, extensive Flat Roof tops, oversized Ceremonial Front Lawns, and the big box dross landscapes types: Suburban Buffer Strips and Parking Lots.

Having developed a taxonomy of waste-spaces documenting natural, material, political, and spatial conditions, the studio anticipated the challenges of post-oil urban transformation through the siting of building-landscape interventions to foster community knowledge-sharing and re-skilling for food production and animal husbandry. These visionary projects are akin to a seedbank, a lending library, an information kiosk, a classroom, and a tool co-op – they are sites that hold the “starter” materials for continued post-oil existence. Project proposals included the spatial and infrastructure needs required to house animals and their caretakers, as well as spaces to share knowledge.

Educators have a responsibility to prepare students for the future that they are going to inhabit and in which they will practice, not merely the one into which they will graduate. This future will likely be characterized by the re-appropriation of today’s waste-spaces and the reconfiguring of current infrastructures to support more productive outcomes. In this project, students cultivated a responsive and optimistic opportunism by anticipating new programs and deploying design interventions that insert productive space into everyday landscapes.
Border Stories: Opening Hong Kong’s Frontier Territory
Joshua Bolchover, University of Hong Kong

The paper will describe emerging spatial phenomenon that have arisen as a result of the complex urban dynamics occurring across the Hong Kong and Shenzhen border in Southern China. This border currently operates to separate political ideologies; economic systems; citizen identities and rights and social structures. Unlike other peripheral city conditions this border is an extreme case; as Hong Kong thins out and becomes more rural it is bound by the dense urban edge of Shenzhen. The coexistence of the core and the periphery in such close vicinity is a unique urban morphology resulting from the historical evolution of both cities. A legacy of this evolution is the Frontier Closed Area – a buffer zone and police protected no man’s land that was set up by the British in 1951 to stem illegal migration and smuggling from the Mainland – that has been closed off to the public until very recently.

On February 15th 2012, 61 years after it was created, this zone was partially opened. A residual space that has developed its own ecosystem and natural habitat, the land pressures from both Hong Kong and Shenzhen now make this land extremely desirable for development. What could the future use of this area be? How could it provide an urban interface that could support the needs of the citizens of both Shenzhen and Hong Kong? How will the tension between private ownership, economic growth and public space be negotiated? How could the uses of the area adapt and change to each city’s future development as they grow closer towards unification? The dual impetus of Chinese economic reform that commenced in the late 1970s together with “handover” and the establishment of the Hong Kong Special Administrative Region in 1997 has meant that both cities have become increasingly codependent. Each urban system has become reliant on the other for specific forms of exchange that include drinking water; capital; waste disposal; material and knowledge. As such, the future of the Frontier Closed Area represents a critical juncture in the acceptance or rejection of the creation of a conjoined Hong Kong-Shenzhen Metropolis.

The paper will argue that the future of the FCA should harness the unique dynamics and spatial conditions that have evolved through the inherent differences between both cities. These are manifested through narratives of this in-between space: Parallel traders travel back and forth between the two cities laden with goods desired from either side; pregnant mothers transit to Hong Kong to give birth to guarantee citizen status for their newborns; border school children from Shenzhen cross the border daily to be educated; farmers in Shenzhen use informal border crossings to access agricultural land; or truck operators illegally dump containers creating scarred landscapes in Hong Kong. The paper will describe each story and their spatial implications and propose how these relationships could give rise to a new form of urbanism - an Open City - for this zone that prioritizes the construction of a unique and mutually beneficial urban ecology.

Left Behind but Filling the Voids: Rethinking Northern Mexican Urban Peripheries
Gabriel Diaz-Montemayor, University of Texas at Austin

Mexican urban peripheries grew exponentially after an agricultural land-ownership deregulation derived from NAFTA and after 12 years of a federal policy determined on diminishing housing deficits by the construction of millions of subsidized homes. The physical outcome of this policy are hundreds of low income subdivisions marooned and isolated in wide and largely vacant peripheries, far away from employment, service, commerce, and recreational centers.

This policy was favored by 2 presidents coming from the same political party between 2000 and 2012. In late 2012 a new president came to office from a different political party. The new government immediately acknowledged the urban and social disaster provoked by the centrifugal growth policy and created a new federal ministry for urban and territorial development to address these issues. This new ministry is currently developing policies and guidelines to reverse growth to a centripetal, subsidized urban infill pattern. This change is promising given the grave problems derived from lack of infrastructure, social cohesion, and weak economy. The situation is particularly unique in northern Mexico, where in those same years and against the backdrop of a barren landscape, crime and violence surged, emptying many peripheral subdivisions.

What will happen with the hundreds of subdivisions and millions of homes and people scattered in ample peripheries which will take many years, if ever, to become integrated components of the city?

This paper first maps, measures, and characterizes the current conditions of these fringes in 5 cities of northern Mexico. Local planning institutes and the National Institute for Statistics and Geography (INEGI) provide with up-to-date maps, historical maps, and urban data, while the former also supply their preliminary responses to the new federal policy. This initial analysis confirms regional patterns and a repertoire of issues and stimuli. Secondly, the investigation proceeds to conceptually intersect these conditions with contemporary ideas of urbanism such as Sustainable Urbanism, Landscape Urbanism, and Ecological Urbanism. This conceptual testing determines unforeseen opportunities for the urban peripheries in the economy driven / media heavy public perception of the problem.

Finally, one prototypical urban periphery is visualized in diagrams, maps, and renderings exploring its integration with the landscape and the city, from the inside-out and outside-in. Envisioning decaying subdivisions turned resilient communities tied to their ground by a mix of top-down and bottom-up actions to appropriate vacancies both outside of their limits and inside, with a mixed use, dense, intense, and diverse development where abandoned lots and buildings are retrofitted into community programs, while site specific qualities relate to regions and ecosystems. This detailed testing also operates as a catalyst to understand the conditions that separate those subdivisions with a capacity to thrive in the new urban growth policy against those that do not.

In a XXI century plenty of red-fields being conceptualized as green-fields, millions of foreclosed homes and unfinished housing developments; the neighborhoods and communities of the expanded Mexican peripheries provide an invaluable laboratory to investigate the sustainability and recovery of the many now left behind in both the developing and first worlds.
Urban Environments + New Regionalism Continued

Soft Infrastructure Applications
Seung K. Ra, Oklahoma State University

The concrete fallout of mid-century industrial progress is now nothing more than ossified infrastructure consuming the American city. Euclidean zoning, the agent of this movement, brought about single-use land subdivisions that encouraged excessive transportation channels to connect their disparate functions. For decades, zoning codes and highway corridors outlined scaleless tensions that engineered urban socioeconomic partitions and mobility dispositions. Oklahoma City offers a cityscape accessible for design scrutiny: its broad array of city center surface parking lots, substantial presence of brownfields, and recent realignment of the downtown I-40 corridor have resulted in a conspicuously unoccupied central business district. The city’s ambitious “Core to Shore” plan proposes a redevelopment of 3,000 new housing units apportioned along one mile of mixed-use spaces connecting downtown with the man-made Oklahoma River to the south. Utilizing Oklahoma City’s transition in this projected fifteen-year period as a case study, this paper proposes the application of new soft infrastructural measures to safeguard the Core to Shore program’s adaptability.

Soft infrastructure is capacious; it has latent scalar responses that can adjust to the human scale while still sustaining a “default redundancy” across the urban spectrum. This necessary redundancy both safeguards a common blanketing of infrastructure and permits unique deviations for ad hoc community input. Studying the Core to Shore plan as a platform for soft infrastructure, three development strategies emerge: open-data programming, participatory form-based codes, and performance-based design metrics for culture. An open-data approach to programming the proposed “Boulevard,” the thoroughfare replacing the demolished I-40 Crosstown Expressway Bridge, streamlines the measurements of mixed-use functions, office vacancies, and on-demand transit along this new downtown corridor. This cloud-based data system will render the Boulevard a forum for recording concurrent market/transit studies to sustain the city’s central business district. Likewise, open-source form-based codes empower the residents of the dense townhome West Park quadrangles and the live/work and workforce housing of Parkview to collaboratively define the current and future grain of the streetscape. Open-source form-based codes offer a participatory method to urban planning in which user-generated constraints will reference each neighborhood’s needs; initial street mapping will pass through the hands of prospective tenants. Extending the project’s vision south to the shore of the Oklahoma River, soft infrastructure in the form of cultural projects at Riverlake and Wiley Post Park are designed with performance-based metrics to generate a feedback loop of public-cultural design. The city’s empirical assessment of personal and cultural interaction will sharpen its perception of future global movements.

These approaches to soft infrastructure contribute to sustainable and flexible environments that can support adaptive reuse and responsible redevelopment in the future. While these potential strategies were applied and investigated in terms of development for Oklahoma City, they were conceived to apply to future urban development in other cities around the globe. The concepts of openness, participation, feedback, and performance-based design, work together to enhance users’ quality of life, connectedness to place, and cultural relevance for an open city and a global society.

Absence of Continuity in Cultural Landscapes
Bartłomiej K. Sapeta, Keene State College

Eminent domain legislation affects private real estate ownership and creates an urban development platform responsible for dynamic evolution of modern cities. Additionally, the presence of clear distinctions between land surface and underground infrastructure, and mineral and air rights, transforms a fairly horizontal pattern of a traditional polis into a multi-layered, increasingly more vertically oriented organism, comparable in principle and complexity to an ecosystem of a tropical forest. This intricate configuration is also affected by solar and water rights being traded similarly to other commodities available in a free market economy. Still, new zoning trends suggest codification of all facets of urban development according to the triple bottom line philosophy: profit, sustainability, and social justice. Thus, the progress of municipal expansion can be explained through the theory of “an invisible hand of the market” propelling human desire to research, innovate, and transform by embedding sequential records of socio-economic changes in elaborate cultural landscapes.

While no modern metropolis approaches the visual chaos of a futuristic city portrayed in the movie “Fifth Element”, the patterns for upcoming multidimensional interventions within the urban fabric are clearly visible and quite ready for implementation. From self-driving cars and ultra fast mass transportation systems to augmented reality, micro apartments, and vertical farming, the experience of the next generation of urbanites will clearly encroach on today’s science fiction.

This paper discusses the future of a city as an organism dependent on carefully planned obsolescence embracing “cradle-to-cradle” design philosophy that defines contemporary sustainability movement and lays foundations for potentially holistic yet “sanitary in their outcomes” design approaches. At the core of the culture of planned obsolescence is a new paradigm of aiming for all human creation to be equipped with an expiration date where buildings will be substituted with new structures providing latest features, enhancing environmental controls, and improving healthy living conditions.

On a very rudimentary level this concept is hardly a novelty. In the complexities of today’s real estate market, land leases expire regularly and building interiors change tenants and occupancy types according to the rhythms of economic activity. Still, the idea of an entire cityscape being regulated on par with the realms of manufacturing and entertainment industries that regularly churn out new releases of digital gadgets and desired realities, seems unattainable if not farfetched due to the physical scale, logistical complexities, and regulatory interdependencies of a modern megalopolis.

If left unchecked, the “invisible hand of the market” might cripple human ability to identify with the origin and context of material history derived from cultural activities of our ancestors. The life-long multi-sensory exposure to past will only be substituted by increasingly more virtual and augmented realities, eventually reinforcing platonic relationships. Therefore future cultural landscape might lose its ability to accumulate knowledge because entire layers of its composure will be replaced at specified intervals.
Community Resilience through Two Models of Public Space Intervention: Top-Down Stakeholder Driven and Bottom-Up Grass Roots Community Initiatives

Nancy Chikaraishi, Drury University
Traci D. Sooter, Drury University

In the aftermath of disaster, resilience of a community can be improved through interventions in public spaces. This presentation will discuss the design and ongoing research of two public space interventions in response to the 2011, EF5 tornado in Joplin, MO and the 2012 Superstorm Sandy in New York/New Jersey. These Open Space, Sacred Places are designed to improve resilience across individual, family, community, and social-ecological scales.

Two distinct models of intervention were taken for each location. One is a top-down stakeholder driven (Joplin), the other is bottom-up community driven (NYC). Stakeholder partnerships with the university and architecture students included grassroots community organizations, the local municipality, private disaster response organization, individuals affected by the storm, businesses, disaster resistant manufacturers, private grant foundation, the USDA Forest Service and the Department of Natural Resources and Civic Ecology lab at a second University.

The community driven project in New York allowed for informal, grassroots interventions to take place in five separate communities as researchers observed and documented the process before a trans-disciplinary research team offered assistance for one of the public spaces.

The diversity of the research team included the disciplines of Architecture, Music Therapy, Civic Ecology, Engineering, Social Science, Psychology, Forestry and Landscape Architecture. Through this unique collaboration along with students and the respective communities the two Open Space, Sacred Places (OSSP) were designed and built.

The Joplin OSSP, the stakeholder project, is full of symbolism and sentiment all intended to help those affected by the storm to improve resilience by moving through the healing process. The design weaves together four main conceptual design ideas derived from Worden’s four tasks of Mourning with four architectural elements in the OSSP. These tasks describe the means by which a healthy person works through the pain of grieving for a loved one or something lost, and moves into the next phase of life. Architectural and natural elements symbolically represent the tasks as a person moves through the gardens.

The New York OSSP, the community driven project, has little to no symbolism and is more organic and bottom-up from the community. Research will continue through the next five years on the impact of the two approaches to intervention in these public spaces. This presentation will discuss best practices for designing and leading stakeholder interventions, insertion into curriculum and present to date findings of the comparisons of the two sites and their impact on community resilience.

Marketplaces of the Open City

Jennifer Lee Michalszyn, Wentworth Institute of Technology

One definition of globalization involves the internationalization and liberalization of financial markets. Hong Kong has long been considered a global city and a financial marketplace. In addition to the towers of the global markets that dominate the city’s skyline, its urbanism is most vital at the ground level(s). This paper will examine the recent transformation and evolution of diverse market spaces in Hong Kong, that range in scale from the street market to the former Central Market building.

Following changes resulting from bird flu outbreak, and in lifestyles, street markets in Hong Kong are declining. The Hong Kong Urban Renewal Authority has attempted to conserve the street market as a form of living heritage, through the development of a supporting small-scale infrastructure.

At the other end of the scale is the Central Market, a building the size of an American football field, which is located at the intersection of the mid-level escalators and a network of podiums and pedestrian bridges; the now abandoned building is literally penetrated by, or grafted onto, urban infrastructure. It is a quotidian building from the early twentieth century that once housed a wet market. The structure has stood empty for over ten years.

The Central Market is the site of two conditions that are usually held in opposition in the discussion of the public and urban realm of North America:

The first is as a participant in the network of pedestrian bridges that connect a privatized urban realm of shopping centers and office tower lobbies. (This network is well known but its recent growth has been exponential, where the multiplication of a banal condition has metastasized into something extraordinary.)

The second is as the subject of public debate regarding the urban and public realm, the politicization of architecture (where people literally chained themselves to buildings) and the development of a public participatory process in Hong Kong.

The Central Market was the subject of a graduate architecture design-research studio in 2011 and 2012 at [institution]
The Role of Client Engagement in Public Space Making in Korea
Daniel Oh

In a decade of unprecedented global real estate boom and the rise of technology in graphical representation and fabrication, architects find themselves racing to create the most unusual shapes and stylistic statements. However, the aim of this paper is not about the architects’ pursuit for “mass” appeal, but rather area of architecture that has lost appeal to architects: engaging and collaborating with clients in the design process.

This profession-wide lack of interest in client engagement has been marginalized, at best, by practicing architects for many years. As a consequence, both general public’s discontentment and criticisms have become essential to address. In addition, criticisms are more severe in public projects where numerous client groups and interest groups bring in a complex web of social and political agendas. In the Greater Seoul Region alone, most public projects built over the last decade have been proven to be highly speculative and politically charged. These projects include one of the most expensive city halls in Sungnam-si, 18km canal for cruise ships for mere 550 passengers a day, and a floating exhibition center that is currently out of use. The current mayor’s declaration to zero-based review on all public construction projects won him his seat at the city hall. And today, most public construction projects have been cancelled and only few remaining projects underwent lengthy enquiries by various citizen groups.

The public sector had to search for new ways to justify public construction projects in order to be transparent and gain public’s trust over the new government. However, neither the public sector nor architects were equipped to take on the challenge. The public sector began to implement untested citizen consultation processes which brought more confusion than decisions, not to mention additional costs and delays. Whether out of desperation or from rational justification, commissioning a relatively young society made up of professionals in the field of “service design,” best known for product optimization and user-interface design (UX) in Korea. The City of Seoul and other public sectors commissioned Service Design Council to spearhead some of the high-profile public projects such as a multi-cultural and art center in Gwangju, a public hospital in Seoul and an alleyway in a crime-ridden neighborhood in Seoul, caught many architects by surprise.

This paper investigates the recent shift and its implications in the way the public sector conducts and maneuvers public projects. And by comparing the scope and methodology of service design provides with architectural services, this study aims to find causes and weak links in architecture. The findings ultimately point to two weak areas of architecture: client engagement and interdisciplinary collaboration. The paper recommends architects to strengthen and rethink how clients can participate in the design process to make better public space and architecture.

Edges of Urban Block in Seoul as a Liminal Space
Sanghun Lee, Konkuk University

A city is usually composed of houses, commercial shops and public buildings. Among these, commercial shops are the most dominant program in modern capitalistic cities. Commercial facilities supporting urban neighborhoods in Seoul are usually packed in multi-story buildings called Keunseng. They are placed along the main streets at the periphery of urban blocks around residences located inside the blocks. This is a unique type of spatial configuration of houses and shops in Korean cities.

Keunseng is undoubtedly a product of rapid capitalistic urbanization of Korean cities since the early 20th century which forcefully inserted grid patterned main streets into the traditional urban fabric. Yet traditional urban planning and culture continued to exert influence on the urbanizing process. This resulted in the unique dual structure of Seoul in which two different street patterns have been superimposed on one another: that is, grid patterned wide thoroughfares for vehicles surrounding urban blocks and narrow, labyrinthine, intimate alleys for pedestrians inside the blocks. Edges of the two different spatial structures may then be called liminal space, which does not belong to either side at once and belongs to both. The drastic change of patterns and scales of the two different urban layers at the edges creates a unique spatial condition. The dynamic experience of Seoul is mostly due to this abrupt change of spatial quality at the edge where these two different street patterns collide.

Keunsengs are usually built at the periphery of urban blocks. Because the ground rent is high along the main streets, they tend to be vertically expanded. However, the relation of building to the street is different from Western cities. In Western cities, a building front forms a clear boundary between public and private spaces, between inside and outside. However, keunseng does not have a clear boundary between public and private space. For example, stairways and corridor of multi-story Keunseng are considered a public space, almost an extension of the street. Also, while building facades in Western cities are publicly disciplined, the surfaces of Keunsengs are sites of undisciplined contestation by a variety of individual shops. This is why high-rise keunsengs and their surface clutter are pervasive in Seoul.

What are the forces behind the formation of this type of unique spatial configuration of Seoul? What are its implications for urbanism of Korean cities? This paper attempts to answer these questions by focusing on the spatial characteristics of Keunseng at the edges of urban blocks.
We Are All Urbanists Now: The TED and Gerry Show
Sabir Khan, Georgia Institute of Technology

The differences in tone, content, and language between the discourse and practices of “urbanismo” (broadly speaking the way in which the relations between cities, city life, and citizens are imagined, addressed, and implemented in a post-Lefebvre “Right to the City” Europe) and of neo-liberally inflected civic urbanism (of which Bloomberg’s -- and Jeannette Sadik-Khan’s -- New York is an exemplar), are remarkable yet are rarely remarked upon: the ostensible goals of “livable” -- and visitable -- cities shared by the creative classes apparently renders these difference invisible.

This paper focuses on the particular inflections of the new city literacy in the US that has spawned multiple websites, blogs, and interested groups who follow and consume the latest developments -- projects, proposals, competitions, policies -- with the ardor of amateurs (in the word’s original sense in the French) as well as of disheartened professionals who still hope what they once believed in (and experienced during trips to Europe) may still be possible stateside.

A discourse analysis of TED Urban talks, of the Gerald D. Hines/Urban Land Institute Student Design Competition, and a selection of online newsletters, websites, and forums (like Next City, for example) uncovers a whole new urban shorthand, a full tool-kit of ready-at-hand solutions and technological fixes, of “tidy, just-so solutions” that inform both urban design professionals as well as students who assemble their proposals out of the modular cornucopia of the latest ideas, notions, and practices: Innovation Districts, Creative Class/Attracting Talent, Shareable Cities/Collaborative Consumption, Crowdsourced Urbanism, Lean Urbanism, Self-organizing Urbanism, TODs, BRTs, 8/80 Communities . . .

The technological solutionism, the digitally inflected civics, and the developer-speak “best practices” that have contemporary American urban practice and its followers in thrall are an ideological and methodological planet away from the on-the-ground social urbanism of Medellin and Bogota, or the landscape summarized by, for example, Peter Hall in his latest book: “Good Cities, Better Lives: How Europe Discovered the Lost Art of Urbanism”. For us to truly leverage the currency that city and city life currently enjoys, perhaps we need to break the spell that all these “best practices” and catch phrases have cast upon us.
OPEN
Clark Llewellyn, University of Hawaii
Jin Baek, Seoul National University

Challenges and Opportunities to Compact Urban Forms in Dubai: Coping with Conflicts in Opinions of High Density Neighborhoods
Khaled Alawadi, Masdar Institute

Urban environments are being transformed and developed at a massive pace and scale, which often precludes forethought and justification. Dubai, for example, is a case where numerous megascale developments were built in record time without being integrated into the existing urban fabric. In fact, examining Dubai’s urban growth proves to be simultaneously astonishing and frustrating. Dubai has urbanized and grown rapidly. This growth is seen in size, territory, manifestation, and urban morphology.

With this rapid growth and the consolidation of megascale urbanism, the size of ecological and urban concerns has skyrocketed, leading to pressing spatial and sociocultural challenges. For example, the juxtaposition of Dubai’s urban areas contributed to a patchwork morphology that is dispersed, segregated, and fragmented, yet connected by multi-lane highways. As a result, integrating ecological and social aspects into creating high quality neighborhoods for Dubai is an ultimate challenge. Therefore, this paper aims to explore, articulate, and advance design strategies and tactics that promote better sustainable urban design for Dubai. In particular, the paper entails a study exploring the potential benefits, feasibility, and social implications of promoting density in Dubai’s neighborhood development.

This paper attempts to elaborate whether or not high-density residential neighborhoods could be successfully implemented or be the norm in Dubai, as opposed to the status quo low density and single-use practices. In particular, I conducted a case study analysis of Dubai that explores and compares expert, resident, and government opinions of compact urban forms for neighborhood development in Dubai. I used three methods of inquiry:

First, I used the Delphi technique to obtain expert opinions and knowledge regarding promoting density for Dubai neighborhood development. This Delphi study brought together academics and practitioners in the fields of urban design, planning, architecture, and sustainable development. Second, I conducted interviews with government officials in Dubai to identify troublesome challenges that constrain the implementation of densification strategies. Third, I conducted self-administrated surveys with the population in Dubai to identify the public reaction to and preference for the densification ideas. My data is derived from a wide range of people including academics, practitioners, residents, and policy makers, and strives to think, benefit, and generate discussion about the design of future neighborhoods.

The opinions of these three population segments are significant because the professionals possess experience and are generally the powerhouses of the design tactics and ideas. The public contains the users and the consumers whose acceptability is essential because community design involves issues about which people care deeply, like cultural norms, social values, and community appearance. Last, the authorities are the policy makers who have the power as well as the background about the challenges that place major limitations on implementation. Out of this process, the paper synthesizes experts, officials, and public input to compare responses across research participants. This section identifies and assesses agreements, disagreements, and competing priorities between the three groups. Finally, the paper discusses some major obstacles challenging different aspects of sustainability and lays out potential recommendations for the one’s shaping and regulating the environments to prevail over the challenges.

Victory Gardens: Neopastoralism and Motion in the Open City
Catherine Bonier, Louisiana State University

As open cities flourish, thriving on an invisible flow of information, the old world order is being forced into obeisance, subdued beneath linear neopastoral landscapes. Ironically, cutting edge landscape urbanism reprises the 19th century fascination with ruins and pastoral scenes as remedies for urban degradation. Today instead of faux Gothic ruins planted within a grove, old industrial infrastructures are made to linger beyond their usefulness, forced to submit to a softer purpose. This process of “remediation” is only partly ecological. Often a specific visual signification is key—in most cases a garden calibrated to urban leisure, heavily feathered with native plants, flowing along the old paths of heavy industry, framed by concrete and steel remains.

What is the place of design in these newly reclaimed terrains? Architecture, often practiced by multidisciplinary teams, shapes these gardens in various ways. It is a challenge to construct a conscious civic emblem out of a large scale linear landscape that must fulfill quantifiable ecological and utilitarian functions. Space is sometimes claimed through the framing of views and proposal of specific postures of rest and motion. Occasionally enclosure erupts from the landscape in the form of pavilions, which struggle to hold the heavy banner of culture and history. The long term value of these gardens is still unclear. Are they successful urban parks, placeholders for future construction, or simply arteries that pump life into surrounding real estate?

Despite controversies, projects such as Cheonggyecheon are more than restoration projects, they are visible victories. Urban dwellers may now stroll the banks of the ancient waterway, free of the elevated highway that once tore through the heart of Seoul. Similarly, the High Line proclaims the passage of the railroad age, and trumpets the victory of a global culture in which citizens have a right to wander through a forest of glimmering residential towers. The Tanghe Red Ribbon River Park collapses ecological function with a multipurpose form tailored to the new urban populations of Qinhuangdao City.

What does this pastoralization of 19th and 20th century infrastructures mean? How do these new linear gardens compare to large 19th century parks such as Central Park that were consciously crafted to conceal engineering works, to provide recreation and relaxation, and to act as lungs for the city? Does it matter that contemporary infrastructure parks are often linear and therefore support a mobile version of civic life that consists in large part of walking, following, and passing? Is this the remedy for our desk bound age? Perhaps this mobility itself is the proper emblem for the victory of the Open City.
From Transparency to Blur

Thomas Mical

There is, in the diminishing screens and surfaces of contemporary spaces, something like an infra-thin minimal difference that is produced in the surfaces of transparency. The super-diversity of contemporary surface-optical techniques (including transparent, translucent, and reflective) agitates surfaces as other than purely “see-through” or clear only under certain conditions. These experiential optics of experiential reflectivity persistently haunt the idea of transparency. From this insight, a whose series of interpretations regarding the limits of transparency can be opened up to thinking. Posited as a progression or movement, we expose how the prior interior/exterior dualism of glass walls has been subverted by the ephemeral, the ambient, and the blurred in emergent media-architecture.

The ascendency of modernism is the ascendency of the myth of transparency, yet transparency is a subtractive strategy; like negation, it is never complete. There is, in the diminishing screens and surfaces of contemporary spaces something like an infra-thin minimal difference that is produced in transparencies. The modern consequences of transparency will then be shown to stage the contemporary appearance of the emerging tropes of blurring as a dissipative structure in media-architecture. Blurring precedes perception, yet this phenomenon has increasingly been used in art, media, and architecture to overcome the “clear and distinct” diagrammatic categories of spatial formation. The blur is created from the arrested movement between concept and image, an abstract-machine within perception and representation: the blur approximates that which persists as unnamable and un-representable, as figure without form. Contemporary blurring is an under-examined construct that belongs to perception, sense, representation, space, concept, and effect.

This text argues, following the critical method and conceptual model of media-philosophy (pioneered at the European Graduate School), that transparency is not the media but the message, and concludes that transparency masks a much older visual construct, whose appearances are paradoxically staged in the demise of transparency – the blurred optic of blurred figures / blurred spaces. These divergent optical regimes (transparent, translucent, and reflective) produce surface effects, not as real, but as potential, contingent, or impossible modes of transparency. These optics reveal how the ephemeral and the ambient correspond to a new optic of blurring in media, architecture, and emergent media-architecture.

From Transparency to Blur interrogates select art, design, and architectural practices (20thC-21stC) through these contemporaneous media theories, evaluating their performance as forms of communication, processes coding/decoding, dislocation and subject-positioning, to identify the complex shifting dynamics between subjectivity, optics, and sense after transparency.

Joseph Paxton’s Lily House: A Heterotopia at the Roots of the Myth of Transparency

Ufuk Ersoy, Clemson University

In these days, the dependence on non-renewable energy sources and the related ecological crisis have come to occupy public consciousness. In popular culture, environmental anxieties have lead many to instantly dream of a ‘more natural’ future, and have urged many architects to reconsider the dualisms of inside/outside and natural/artificial at the center of modern thinking. In response to this pervading phantasmagoria of green architecture, this paper calls back a seminal paradigm at the roots of modern architecture: the Crystal Palace designed and built by the gardener Joseph Paxton in 1851. Different from the historical accounts which have generally described the building as the outstanding milestone in the development of dry construction methods and frame structures, this paper will call attention to Paxton’s overlooked gardening background. In particular, the paper will examine Paxton’s ambition to imitate nature and to bring it into the industrial city. In methodological terms, using Michel Foucault’s theory of ‘heterotopia,’ the paper will suggest an alternative reading of the Crystal Palace far form technological determinism.

Paxton himself admitted that the idea of the Crystal Palace derived from the Lily House he had constructed in 1850. In the Lily House, the gardener was attracted to the fictive opacity of glass. For him, the transparent glass envelope was an instrument to measure and control the physical qualities of interior space. It allowed him to reinterpret the act of ‘cultivating’ as an artificial gesture which converted nature into a complete work of art. In other words, the transparent glass enclosure enabled Paxton to pass over the material aspects of reality in order to achieve a contact with the natural truth and to manipulate it. But, in his Lily House experiment, Paxton was not interested in a continuity between inside and outside, or nature and society. Rather, the main objective of the hothouse was to transcend the local conditions; it was a ‘natural fiction’ built to relocate and regenerate unknown species collected from distant places. Read from a Foucauldian standpoint, the hothouse deserves to be called a heterotopia; it was a gap isolated from its context to serve both to control and to represent its ‘foreign’ occupants. Unsurprisingly, the Crystal Palace was similarly built to safely exhibit two strange entities of the period: industrial objects and distant cultures. Investigating the fictive role Paxton assigned to transparent glass, this paper does not only intend to reveal the heterotopic nature of the nineteenth-century hothouse, but also prepares the ground for the criticism of the contemporary trend associating transparent ‘biospheres’ with the notion of environment-friendly architecture.
Informal Urbanization of Latin America: 
The Post-Global Proto-Cities
Diana Maldonado, Universidad Autónoma de Nuevo León

The contemporary cities are characterized by traits of hypermodernity, but also by a sharp inequality, they are local and global at the same time. The global era and its ideal of multiculturalism were questioned at the beginning of the current century with the survival of the imperial hegemony and the religious fundamentalism. The open city is post-global.

Latin America is considered the most urbanized region in the world; 80 per cent of its population lives in cities, and more than 111 million people live in squatter settlements (post-global proto-cities); despite the statistics, this informal urbanization is marginalized from the history and theoretical discourses, still dictated by a powerful Westernized center.

In the “south-continent”, favelas, barrios populares, and villas miseria represent the border-spaces, the informal-formal zones of contradictions and ambiguities, the Terra Incognita where everything (lenses of ethnicity, tradition and globalization) could be negotiated. This paper looks for the remap of those informal places, to argue that there are indeed different urban principles in the built environment of the Latin American proto-cities.

This geography of “hybridity”, is not free of power struggles, hegemony and injustice, although it represents the continuing resistance with an open façade, it is a premonition of the cities of the future; a new urban-architectural vision needs to be thought from here. Using case studies from Mexico, Brazil and Argentina, I propose to remap these key spaces of the post-industrial metropolis, considering realities and virtual realities, in order to find new tools to allow us to understand this new urban order, and perhaps re-write the history of the cities, and from there to re-build them.

Displaced Territories
Bradford Watson, Montana State University
Sean Burkholder, University At Buffalo, SUNY

In 1969 Michael Heizer conceived and constructed displaced / replaced mass. This piece excavated three large holes in a dry lakebed in Nevada; in which three boulders were placed, each weighing the same as the excavated material. This piece created a dialogue of not only the mass of different materials, but also of the movement and transformation of that material—a sorting. The piece also raised the question of where the excavated material went, for there is no displacement without replacement. Our landscape is defined by displacement / replacement. An example as obvious as Heizer’s foreshadows the anthropogeomorphological condition we currently find ourselves in; a byproduct landscape created by industrialized sorting regimes.

Butte Montana is a displaced / replaced mass at an immense scale. For over a century this landscape has been extracted, sorted and deposited. This sorting began in the 1860s with the displacement of material by placer mining and the individual shaft mine, dig with a shovel and bucket. It quickly grew into an industrialized process, displacing over a billion tons of rock, feeding the world’s thirst for copper. From the moment material is dislodged from its parent mass, decisions must be made as to where it will go. In Butte, rock containing precious metals is moved great distances for processing while the rest is considered waste. The valuable metals, the only materials exported from the region, constitute only 0.5-2% of the total material removed, resulting in a landscape of toxic spoils, significantly defined by displacement and subsequent replacement.

The displacement / replacement operation is not always so clearly reciprocal. While Butte and other mining sites clearly evidence the displaced terrain much like a road cut along the freeway - with a clear relationship between pit and pile, in the Great Lakes region, the displaced terrain is much more subtle. Here the replacement is the more tangible condition; a resultant of the continual dredging of navigation waterways that have accumulated the eroded soil of over 200,000 square miles of North America. Yet, similar to Butte, these operations have produced a localized displaced / replaced event through the creation of a network of spoil-scapes designed to contain the displaced material. The parent condition of much of this dredged material was within agricultural land, giving it the opportunity to collect various pollutants during its migration to the channel from which it is to be displaced. It is this associated material, what land either contains or collects, that transforms the replacement process into one of waste management, thus curtailing possible futures.

Both of these situations are created by a focus on what is gained through displacement with little concern for the impact of replacement. This replacement produces a series of ambiguous landscapes akin to the terrain vague of de Sola Morales. This paper will map and explore these two displaced / replaced landscapes and reconsider their social and ecological roles within their respective urban regions. Through the mapping of these conditions, agency can be given to this byproduct such that waste becomes territory.
Race, Rhetoric and Revision: Considering June Jordan as Utopian Architect
Charles L. Davis II, University of North Carolina at Charlotte

The scholarly critique of Western bias in modern architectural history has led to new inclusive historiographies of design in recent years. Mark Jarzombek, Vikramaditya Prakash, and Frank Ching’s Global History of Architecture (2010) is only the latest historical survey that reconsiders architectural genius from formerly marginalized perspectives. Despite these advances, however, African Americans continue to be underrepresented in historical surveys of modern architecture. This situation is due in part to the racist patterns of patronage and licensure that hindered the progress of black designers in the twentieth century. My research seeks to redress this oversight by rejecting professional licensure and physical construction as the sole criteria for inclusion in the architectural canon. I argue that postwar African-American writers have successfully linked black material culture to the principles of architectural modernism with textual techniques that approximate the visual work undertaken by architectural utopian thinkers. Uninhibited by the social and material limits that hindered professionally trained architects, black writers rhetorically offered their readers an immersive intellectual context for reconsidering the broader cultural implications of modernist spaces – even when these contexts were not primarily visual in nature. In this paper, I will examine the manner in which June Jordan’s novel His Own Where (1971) participates in an alternative tradition in utopian modernism that has so far gone unnoticed by architectural historians.

Jordan’s career as a writer and activist is interesting for its flirtations with professionalism, but not only collaborated with Buckminster Fuller in his utopian design for a ‘Skyrise for Harlem’ (1969), but during her youth she undertook coursework in Environmental Design and independently studied architectural history after dropping out of Barnard College. Using Jordan’s textual descriptions of Harlem brownstones as a prompt, I create a series of architectural models and diagrams that materially translate the alternative modernisms outlined in her novel His Own Where. A central aspect of this novel is the work of a young black male protagonist, Buddy, who uses modernist principles to remodel the interior of his father’s three-storey brownstone. Buddy’s intuitive approach to physical space is interesting to contemplate as it both reflexively illustrates the postwar black artist’s unofficial participation in the dissemination of architectural modernism amongst a marginalized population. This description of the black artist’s contributions to architectural culture is true for both Buddy in the novel and Jordan in real time. I offer my detailed analysis of Jordan’s novel as a paradigmatic case study for including the utopian principles of other postwar black writers into the architectural canon, including works such as Ralph Ellison’s Invisible Man (1947), Ishmael Reed’s Mumbo Jumbo (1972), Amiri Baraka’s “The Dutchman” (1964), and Colson Whitehead’s The Intuitionist (1999). Each of these works privileges the black producer and takes black space as the primary social context for considering architectural modernism, which revises the dominant gaze of most historical surveys and challenges or expands our understanding of the historical reach and importance of design culture for diverse populations.

All That Is Solid: Asset Urbanism and the Financial Dynamics of Post-Industrial Urbanism
Matthew Soules, University of British Columbia

Post-industrial urbanization is increasingly, in the words of David Harvey, “driven by the need to find outlets for overaccumulating capital.” Beginning in the late 20th Century and accelerating in the 21st Century, dramatic shifts in the scope, scale, and tactics of global investment capital have made the closely aligned phenomena of market dynamics and urbanization ever more complex, producing a wholly new form of spatial conditions. This novel mode of urbanization is marked by the financialization of built space, or what Saskia Sassen calls, the “financialization of non-financial domains” – where the physical increments of the city more and more function like financial investment instruments complete with stock market like instability. Such things as rapid development, the over-supply of built space, mass vacancies and volatile fluctuations between growth and decay mark the resulting urbanism and present unique socio-spatial challenges and opportunities. The name that this research applies to these defining attributes of the post-industrial city is ‘Asset Urbanism.’ While the physical components of urbanization – units, buildings and parcels of land – have long functioned, at least in part, as investment assets, the degree to which this role has increased has not been met with a corresponding conceptual or operational framework on the part of architects and planners. Current design discourse appears largely outmatched by the agility and complexity of capital that is now driving the processes of urbanization across much of the globe.

In 2012, the author of this paper received funding from the federal government of Canada’s Social Sciences and Humanities Research Council to conduct a multi-year project documenting and analyzing the characteristics of asset urbanism in the countries most acutely affected by the worldwide property bubble that precipitated the 2008 global financial crisis – Ireland, Spain, and the United States. The research proposes that particular urban, suburban, and exurban environments within these countries offer exceptional examples to help illuminate, in their extremity, widespread and systemic financial-spatial phenomena that can be found within cities around the globe, from Dubai to Vancouver. Despite political rhetoric that claims otherwise, in the form of various ‘lessons learned’ regulations, policies, and proclamations emerging in response to the crisis, the dynamics of asset urbanism remain largely in tact and if anything, are accelerating in newly sophisticated means.

This paper presents findings from the government-funded project by focusing on results gleaned from field research in Ireland. Specifically, the paper describes operative and emergent theoretical concepts derived from interviews with key Irish economists, sociologists, real estate experts, policy-makers, developers, planners, and architects. It utilizes photo-documentation and analytical spatial diagrams that explicate built conditions in relation to the immaterial financial practices of which they are avatars. Finally, it draws conclusions for the ways in which the Irish example elucidates dynamics that are fundamental to globalized post-industrial urbanization in general and speculates upon the opportunities that these pose for reframing the disciplines of architecture and urbanism.

Open Continued
Global Peripheries: Growth, Disinvestment, and Change in Multicultural Suburban Houston  
Gregory Marinic, University of Houston

Historically, suburban life has represented the American Dream—a mirror of opportunity and prosperity expressed in an autonomous built environment based on single-family houses and car dependence. In postwar America, suburbs were where most Americans wanted to live—and the developing world took notice. Since that time, the United States has exported its suburban ideals to the rest of the world. In recent years, shifting demographics have begun to suggest that suburbia has become more than a homogeneous domestic utopia. More recently, Sunbelt suburbia has emerged as increasingly diverse, complex, and globalized, as well as undeniably tethered to the developing world. Within this new periphery, undercurrents of racial, economic, and social segregation persist—yet an alternative global peripheral American has begun to reinvent, re-appropriate, and hybridize a landscape of new opportunities—of new resiliences. Within this shockingly altered “suburbia”—dystopias have become the rule rather than the exception. This terrain vague is expressed through disinvestment, radical shifts in usage, spontaneous appropriation of land, and ultimately, in the development of informal settlements and patterns of consumption that fall far outside expectations.

The global aspirations of a new American “suburban” terrain vague reveals subtle modes of colonizing, controlling, and exploiting otherwise unproductive zones, while simultaneously implanting new norms. This paper researches and documents zones of abandonment and less formal urban patterns, as well as shared cultural flows within the urban conglomerate of Houston. Casting its lens on migration and global identities, this paper reveals how cast-off peripheral spaces and places provide new opportunities for globalized city-making. Looking closer, this investigation will examine forces of growth and disinvestment across cultures, while identifying alternative occupancies, ways of building, and sustainable modes for redefining urban “peripheries” into more adaptable, resilient, and diverse environments. Using Houston as a laboratory of peripheral case studies, research will present examples of obsolescence, shifts in consumer culture, and the rise in disinvestment—as well as the rise of an alternative and inherently globalized American Dream. It will cast its lens upon these interstitial occupancies to reconsider futures and to question gentrification in the trans-cultural peripheries of Houston.

Facade: Poche Sutures Gentrified Open City  
Hayub Song, Chung-Ang University

In the Gangnam area, the street grid and underground strip mall was made in 1970. The Express bus terminal was built in 1976, and the Banpo area was designated as a new town with mass housing blocks. The Hanshin apartment block was built in 1979 and the nearby Banpo shopping town was made in 1983. To accommodate increasing population, the subway system line 3 was made at 1985. These structures are necessary but contribute to an obsolete looking urban environment, thus requiring regeneration.

In the 2000s, renewal of shopping mall complex of 20 thousand sq. m, which is the biggest complex of shopping mall, terminal, and hotel was reconstructed as Remi Firststage housing complex in 2009 for real estate profit. The underground strip mall was renovated into Goto mall in 2013. This gentrification process brought wealth and much optimism. It was expedited and often created isolated castle-like tall housing blocks. Residents, tourists, and passer-bys are sectorized and create a swarm of urban blandness.

However, due to the economic change, current renovation cannot be totally renewed. Furthermore, the development that started in the 1970s did not bring a hospitable enough urban environment due to the emphasis on traffic and speed. Pedestrian spaces were marginalized, even though in this post-industrial period, urban grid pattern needs to incorporate public life in much complex fashion at boundary spaces.

Throughout all the changes in this area, Banpo shopping town is obsolete regardless of recent retrofit of signage boards. This obsoletion, although reflects the side effect of the commercial development of adjacent area, comes from the physical marginalization between housing blocks and shopping mall complex.

This symptom happens often in the Open City, and creates a disparity in the city. The task in the Open City needs to be piecemeal, surgically-pertinent, and therapeutic rather than being master-planned and optimistic.

As an alternative to this disparity, this study will focus on the rehabilitation of the boundary spaces where old and new, apartment complex, commercial buildings and existing underground infrastructure intersect. ‘The boundary space’ is defined as the linkage between existing underground infrastructure and commercial buildings above ground as well as the privately owned public space between street stores and apartment complex. Design approaches would be two-folds: 1) the connection of existing infrastructure such as subway entry, sunken garden, and public space, and 2) the insertion of facade-poche, which is a tool-kit structure that sutures the disjointed situation of obsolete and renewed, architecture and city.

It provides a threshold space between marginalized programs and streets, in a form of deck, porch, and shaded space. It can be attached to existing walls of shopping town, of new tall residential complexes, of infrastructure and will make a facile transition through old and gentrified area.

This study will propose a design guideline to improve current institutional framework and to effectively manage the privately owned public space, using installation architecture which is flexible and temporally occupied depending on user’s purpose.
Toyo Ito’s Second Age of Aluminum
Dana Buntrock, University of California, Berkeley

In the mid-1990s, Japan’s recycled aluminum supply grew quickly; industry leaders, working with government support reached out to architects and engineers to develop new markets, especially exploring the structural potential of aluminum. Toyo Ito headed a working group of 36 companies—including not only professional architecture and engineering offices led by Kazuhiko NAMBA, Mutsurō SASAKI and Toshihiko IJIMA, but also Nippon Light Metals, Sumitomo Metals, Misawa Homes, and Tostem. The group successfully made a proposal to Japan’s NEDO (New Energy and Industrial Technology Development Organization) for financial support.

And thus was born a brief flourishing of experiments in aluminum construction. Ito, working primarily with the structural engineer Masato ARAYA, designed six aluminum structures, completed between 2000-2005: a single-family home, a workers’ dormitory, two small structures that never went beyond prototypes, a pavilion intended for short-term use, and a façade. The last two were built in Europe, although Japanese industry leaders offered technical support.

In many cases, these structures were produced outside of the normal regulatory oversight within which architects and engineers work. Some were inhabitable, but not strictly considered buildings. Some—the Brugge Pavilion, sudare, Project K—benefited from the greater freedom allowed temporary works. The House at Sakurajōsui complied with earlier prescriptive building codes that had not anticipated the lower melting point of aluminum, essentially conforming to the letter of the law, but skirting its intentions. But the group also influenced building codes through their efforts; later regulatory changes permitted the structural use of aluminum. The dormitory and cabin were built with conventional oversight.

I will discuss the body of work produced by Toyo Ito and Masato Araya, who played a particularly large role in exploring new uses of aluminum. Ito also designed a group of small public toilets in Fukuoka, a city in southern Japan, with the engineer Mutsurō SASAKI; Araya designed a large sculptural work with one of Toyo Ito’s former employees, although it was never built. Suppliers worked with other respected architects, as well, including Riken YAMAMOTO, Kazuhiro NAMBA, Mikan Gumi, and Coelacanth K+H, the latter working with Araya on a model house built with off-the-shelf parts. One other engineering office, the considerably larger IIJIMA Structural Design Office (with 35 employees in three locations), was active on many of these other projects—and in fact played a key supporting role when Toyo Ito turned to Mutsurō SASAKI to design the small public toilets erected in southern Japan. But Ito’s work with Araya was significant even in this illustrious group, evidenced by the two awards structural engineer was given by the Japan Structural Consultants Association. The first, in 2001, was an Award of Excellence for the House at Sakurajōsui; the second, given two years later, was for his collective contributions to the advancement of the structural use of aluminum. The team had broader industry support, and was able to propose works of great diversity.

I will also explain why these experiments came to an end and describe the long-term impact on subsequent work by Ito and Araya.

Transnational Architecture and New Femininity
Marta Rodriguez, University of Houston

Transnationalism creates a blurring, a reordering of cultural, social and epistemological binary distinctions in our modern period. Transnationalism accepts “style” without hierarchy; it offers cultural equivalence and global adaptation, enabled by communication technologies. Transnationalism is associated with nomadism, strongest in times of strong economic growth and social revolution.

Transnational designers are frequently disciples of great masters, who undergo a transforming encounter by avant la lettre contact with other culture(s). Charlotte Perriand (1903-1999) stands as a paradigm of a French-Japanese architectural dialogue. The ambassador of Le Corbusier’s ideas in Japan, she remains the most influential Western woman architect in Japanese history. In the 1930s, modern architecture became fashionable across much of the industrial world, regardless of location, people or circumstances—the “International Style.” It displaced diversity with a single, exclusively functionalist model. Perriand rebelled and aspired towards a different kind of transnational architecture. Her projects, like the Demountable Weekend House (1934-1935) or Le Vieux Matelot (1938), evidenced transnational features even before her first trip to Japan in 1940, a transformation made possible by encounters with Japanese culture in Paris in the late 1920s.

In the 1980s, Kazuyo Sejima (b.1956) began her career, which followed a similar path; it was another decade of high economic growth, industrial development, and social revolution, this time in Japan. Sejima became the most influential Japanese architect in history; she is Japan’s ambassador to the West. She follows a path of Asian and Western transnationalism keenly aware of its history: her university studies embraced both Le Corbusier and Eileen Gray’s influence, that earlier Japonisme. While working with Toyo Ito afterwards, Sejima became interested in Perriand’s “life of creator”, too. Her first works after becoming independent from Ito’s office, were also transnational in character, like her Platform Houses (1988-1989), which she presented as “futuristic” alternatives to convention.

Both, Perriand and Sejima, moved across cultures from the first moments of their careers. Their transformative encounters between their familiar territory and one far away, between Japan and the West, began before leaving their own homes. Perriand and Sejima embodied a new kind of femininity. They took advantage of their status proactively from the very beginning of their professional trajectory. Women’s freedom was celebrated in popular media, which dramatized the power of women as consumers of clothes, of pleasure, and of domestic and small-scaled architecture. The New Woman had a crucial role in an environment of booming leisure and consumption, where new lifestyles and the flourishing of urban nomadism demanded novelty and experimentation in architecture. Their approach was highly personal, designing objects for themselves, using their body as a unit of measurement, and promoting their image.

1980s Japan, like 1920s France or China of the past ten years, were decades of splendor, rapid economic growth, industrial development, and social revolution in prominent cultures. In this paper I will describe the trajectory these two important women took, but others—like Zaha Hadid in China—offer similar stories, underscoring broader value of the lessons to be learned.
Paradigm or Practice Continued

Requalifying a Hinterland through Indigenous Flows:
Caogong Canal and Ad-Hoc City, Kaohsiung
Yisheng Yang, KU Leuven

“Ecology can be a generating force, a structuring agency of city environment and urbanity…” (Reed, 2010:328). For Kaohsiung, the primary industrial and the port city in Taiwan, the notion of water ecologies and hydraulic adaptation become the impetus for requalifying urban space as the city is challenged with economic repositioning and environmental degradation since the 1990s. Neo-liberal urban development paradigm sprawls across city boundary with road-based urbanization threatening historical water-woven urban fabric and landscape ecologies of its hinterland. Recent developments of stronger climatic variations in floods and droughts also compound the vulnerability of the (peri-)urban environment. As the city is politically embracing a post-industrial transformation, a new spatial paradigm that seeks alternative adaptation to changing water and urbanization regime is called for.

The Caogong Canal irrigation system built during the era Mandarin feudalism was the responsive indigenous water practice that bound physically and culturally with the formation of early settlements and productive landscape. It linked with coastal rivers and urban center at downstream and became the major connective tissue of the city and its hinterland. After 50s, the progressive industrialization and its associated ad-hoc city plans catalyzed by population and real estate speculation spread universal urban blocks. Water(way) is constricted, enclosed, or filled to maximize the developable plots, resulting fragmented flow and yet another flood-prone urban district.

Reflecting upon water urbanism, it postulates water structure has capacity to host part of city/territory spatial configuration (Shannon & De Meulder, 2013:14), the case study premises the Caogong Canal system to be a defining infrastructure that could reframe new urban question in shifting water regimes and requalify spatial paradigms of post-industrial Kaohsiung. This paper adopts layered mapping to reveal the inherent logics of Caogong Canal water system in multi-scalar contexts and explore latent capacities for adapting new urban paradigm. Ba Gua Liao, a ‘special plan district’ overlapping end branches of Caogong Canal at city edge, is explored for adaptation strategies in context of the new water-based urbanism.

The approach of mapping derived from ‘descriptive urbanism’ evolves to include a spectrum of analytical, interpretive and speculative processing of a complex urban territory (Shannon, 2008:105-111), or in this case, the interrelationships between water (Caogong Canal system) and changing urbanisms from agricultural to post-industrial society. In terms of adaptation strategies, the spatial planning assumes hybrid ecologies as “responsive design systems that simultaneously tap into ecological, engineering and social dynamics with linkage to large-scale environmental changes like rainfall and drought” (Reed, 2010:328). In this rationale, Caogong Canal as indigenous water system is the hybrid infrastructure that re-embeds itself to new spatial regime in pursuit of cultural identity and ecological sustainability of post-industrial Kaohsiung.

Ecology as a Framework for Design Methodology
Catherine Ann Somerville Venart, Dalhousie University

This paper illustrates, how Ecology can provide a design framework for architectural research and practice. It takes on architecture not as an isolated object, but as designed ‘parts’ that ‘function’, with the specificity of both human and site needs. Designs are then tested as part of a set of interconnected scalar systems where both local and the broader regional watershed and ecosystem are brought to bear. This methodology situates architecture as an integral part in the critical negotiation between the complex relationship between natural and human processes.

This approach, is based on ecological principals developed during the 1960s “led by Robert MacArthur, ecologists developed a view of the world that encapsulated the notion of the ‘balance of nature’” (Pulliam and Johnson 2002, 52), which at the time, challenged the traditional notion of nature as static. Since then, ecologists have found that nature is not striving to reach a balance; but rather is in a constant state of flux and change, growth and decay, affected by processes that occur in other places and throughout time (70). This, provided a new understanding of nature/landscape, based in a relational perspective of the world that emphasizes processes and flows over objects. Ian McHarg, who’s “work comprehensively applied the understanding of ecological processes and natural systems to human settlements and planning” (Mossop, 2005, p. 166) and Richard Forman, (1980s - 1990s) who developed new understandings of landscape ecology. These theories of Landscape Urbanism and Ecological Urbanism have brought ecology to the focus of design, as “the lessons of ecology have aimed to show how all life on the planet is deeply bound into dynamic relationships” (Corner 2006, 29). Both McHarg and Foreman applied ecology to design, which means considering all landscapes and in fact ‘sites’ as not only being bound to their perimeters (coordinates on a map) but in terms of its’ interconnection to “its natural processes” and the larger systems, of watersheds and ecosystems. In this there is a need to see a site “in terms of the reciprocal relationship between people and the landscape. The important word here is relationships” (Karvonen 2011, 26). Design should be a process of relation, building – a perspective that challenges the objectification of architecture and not only the technological practices of designing, but also the deeply rooted notion in our history and culture, which have formed a belief of the separation of humans from nature; a dichotomy deeply rooted in western society as a whole (Williams 1973).

In summary in shifting the idea of the architectural object or the specificity of a given site to its part in the larger ecosystem, reveals not only the interconnectivity of scales, but the interdependence of us within the larger environment and how the design of architecture can act to reconsider our relationship to the natural world. It may seem daunting to some but it also repositions architecture again as playing a much bigger role, in-forming the part/particulate that then in turn forms our cultural identity and our relationship with nature.

2. Shannon, K. (2008), The ‘Agency of Mapping’ in South Asia: Galle-Matara (Sri Lanka), Mumbai (India) and Khulna (Bangladesh), Footprint 2: 105-119.
Shared Aspirations and Community Identity: How Re-imagined History Museums Can Matter in a Post-Industrial City
Deborah E. Ryan, University of North Carolina at Charlotte

Although other types of cultural sites are experiencing growth, Historic House Museums (HHMs) are seeing declining visitation and financial instability. All too often, HHMs are places where a well-intended docent gestures into barren rooms while sharing a seemingly fact-based, exclusive narrative about the great deeds of the great, white man who once lived in the home. Frozen in a pre-determined period of historic interpretation, many HHMs fall have fallen harshly out of sync with the larger community as demographics change around them.

The well-meaning Board and staff leadership of HHMs, with expertise primarily in museum studies, history and collections management, is ill equipped to deal with either the contemporary understanding of context, or the civic engagement expertise of urban designers and architects. This paper attempts to bridge disciplinary boundaries, and offers a comprehensive strategy for reorienting HHMs from a curated museum setting to a new paradigm of real-life habitation.

Funded by a $100,000 grant from the New York Community Trust, The Historic House Trust of New York City is testing habitation-oriented concepts at the Latimer House Museum in Flushing. The former home of African-American inventor and electrical pioneer Lewis Howard Latimer, the house is located in a predominately Chinese/Korean community. A shared narrative of ASPIRATION will be employed to bridge the past and the present, positioning the house as a center of social history, explorative experience and common identity.

Lewis Latimer’s life story was one of achievement. The child of escaped slaves, he was a civil war veteran and self taught draftsman. He rose through the ranks of an attorney's office from a delivery boy to a patent consultant, largely fulfilling the sort of hopes and dreams like those of the many immigrants who arrive in Flushing each day, although few know of their aspirations.

A civic engagement campaign is now underway to gather, display and share the personal ASPIRATIONS and OBSTACLES from Latimer’s neighbors through civic engagement urban interventions (CEUIs). Precedents for the CEUIs included Participatory City: 100 Urban Trends from the BMW Guggenheim Lab, the Street Plans Collaborative’s Tactical Urbanism 2: Short Term Action, Long Term Change and specifically Candy Chang’s Before I Die and Career Path community walls, where participants individually share their life choices within a larger artistic frame.

Architecture students from the University of North Carolina at Charlotte developed proposals for person-powered CEUIs that will be be moved throughout the neighborhood that surround the Latimer House. Modeled after Michael Graves and Ralph Appelbaum’s New Jersey Hall of Fame Mobile Museum albeit at a more modest scale, or reminiscent of the Wunderkammer inspired Museum, NYC’s one room exhibition in a former freight elevator, the intent of the CEUIs is to provide an opportunity for conversation. This paper will illustrate the CEUIs in action, a summary of the information gained through them, and a description of how that content influenced the re-imagining of the Latimer House experience within its larger urban context.

Research and the Latent Metropolis
Lance Walters, University of Hawaii At Manoa

Despite unprecedented urban growth and population density throughout Asia, massive urban developments have been constructed yet remain unoccupied. Many of these projects surround megacities such as Shanghai and exist as the new contemporary suburb-places of low population density and high gross FAR. From an urban design standpoint it is a completely new and possibly temporary typology. In time these places will come to be inhabited, but the ongoing delay of inhabitation and the fact that more continue to be developed and constructed is what defines them now. An anomaly that divides cities and megacities alike, this is a uniquely modern urban phenomenon that is fascinating by circumstance and surreal by scale.

The most blatant of these developments originate with a 2001 mayoral program, itself rooted in higher level policy. Since 1958 the People’s Republic of China (PRC) has used a series of “five year plans” to direct its growth and development. In 2001 the 10th such plan was initiated through the Jiang Zemin/Zhu Rongji administration. This plan largely focused on existing Tier 1 urban environments and came to include the Shanghai Planning Commission’s One City/Nine town initiative. Although not all nine towns were completed the program has inspired numerous other themed towns across China including at least one ‘Paris’ and (another) ‘Italy’. Most remain uninhabited and, aside from media attention prompted by their sensational and spectacular architectural language, are now ignored and considered ‘embarrassing’ by the Chinese design community for the very same reasons.

A much touted goal of these projects was to demonstrate a mastery of the worlds most highly regarded and iconic works. As seen by the outside observer, this requisitioned urbanism- borrowed architectural and urban strategies- may indeed constitute misplaced urban conceptions; however focusing on such a conclusion continues the same trend that the developments themselves were established under and side tracks a more important and more fundamental urban agenda with significant potential to reshape the unique Sino urban condition. Progressive urban design is built on coming to terms with itself; it is created, tested and learned through a critical self awareness. Though it is not always easy nor obvious to look at what, at times, is considered ‘blight’ or ‘mistakes’, it is crucial to an open city model. The challenge China faces is its willingness to confront, address and inspect its own recent progress.

Throughout the duration of this research, interviews and interactions with Chinese architects and Chinese professors provided context and the present attitude towards these places. Conclusions drawn from a recent Shanghai-based studio course further elucidate this evolving topic and establish an ongoing venue for an open and academically conversational, potentially removing the taboo from those whom it most concerns. Evaluating existing work, especially from those projects still incomplete and not yet fully realized, will facilitate a more empowered and open Chinese urban era.
Informing a Cultural Typology: Research and Design Strategies for a Resilient Community Architecture in Alexandra Township, Johannesburg, South Africa
Christopher Harnish, Philadelphia University

In Alexandra Township, Johannesburg, South Africa, one can observe an idiosyncratic spatial paradigm, in which formalized cultural architecture is underutilized in favor of informal spatial re-appropriation. In this culturally vibrant, densely-packed township with limited public architecture, what socio-cultural dynamics inform this condition? What design strategies might an organization employ to successfully develop a culturally-purposed typology within Alexandra’s spatial fabric?

This paper describes the research and design methodology developed by local citizens and their architect to revitalize the historic Etoezweni Community Centre. The programme focuses on formulating a robust and resilient cultural and economic intervention that is responsive to community youth, while concurrently seeking to recognize the Centre’s vast historical legacy, which includes President Mandela, Umkhonto we Sizwe, the Save Alexandra Campaign and Hugh Masekela.

Research begins with an investigation into Alexandra’s distinct cultural ethos, framed in part by contemporary theoretical perspectives on emerging urban environments in the Global South. The paper goes on to describe a series of action research initiatives devised to glean insight into the project’s complex contextual challenges through constituent-centered interviews, workshops, and community outreach projects.

By examining the unique relationship between Alexandra’s cultural and architectural history and a clients’ vision of the future, a process-oriented design methodology emerges that is framed by contemporary discourse and rooted in the synthesis of local public engagement, cultural expression and economic resilience. The paper concludes by proposing an architectural framework to generate a more dialogic, forward-looking architectural typology that can accommodate the exceptional cultural contexts of the community it is built to serve.

A Conceptual Framework for Enriching Architecture: Nine PIDPR Models
Joongsuk Kim, Lawrence Technological University

This paper proposes nine contemporary practice models in architecture as a framework for discussion about expanding the architectural profession in response to significant contemporary social, economic, environmental, political, and technological challenges. These models are also proposed in response to a growing call for community-profession partnerships, as well as calls for repositioning the profession and asserting the relevance of the profession. These nine partially overlapping models are selected via literature review, case studies, and interviews, include Design as Political Activism, Open Source Design, Advocacy Design, Social Construction, Collective Capability, Participatory Action Research and Practice, Grassroots Design Practice, Pro Bono Design Services, and Architect-Facilitator. It is hypothesized that a set of these nine models is one way to represent practices that are often regarded as a non-conventional manifestations of architectural practice. These nine models also serve as a framework to examine public interest design (PID) that has received much attention from the public, the profession, and academia. Although at least some aspects of PID are considered as non-conventional practice, PID has been gaining popularity especially among young architects in recent years. This research is based on a pilot study that used in-depth literature review, case studies, and interviews with architectural students and practitioners in the USA to comparatively examine the aforementioned nine proposed models of Public Interest Design Practices and Research (PIDPR), focusing on key characteristics (e.g., roles of key players, process, project outcomes), as well as strengths and weaknesses of each model. In this paper, PIDPR is proposed as an approach to advance research on PID, building on its past accomplishments and upon lessons learned from other disciplines. The results of the study suggest that examining the nine models (and it is acknowledged that variations of them or different names for them are possible) can serve as a tool to assess whether any given practice is considered truly public interest design or not. Also the nine models help examine the characteristics of various approaches to public interest design and the diverse roles that architects may play in the practice of PID. Moreover, PIDPR researchers can use these nine models as a framework to examine the boundaries of conventional architectural practice. Despite some challenges (e.g., lack of market, lack of resources, etc.) facing the implementation of some of the nine proposed models, they can help clarify the status, position, and contribution of public interest design to architecture, and help advance PID through more rigorous applied or empirical research. The nine models can also help provide a framework of conversation about ways in which architecture can be enriched and expanded, and how it can help create new opportunities in the architectural profession and in academia to deal more effectively with increasingly complex changes and challenges in social, economic, environmental, political, and technological contexts, both locally and globally.
Untitled_Space by Toornend and Post: Researching the Reality of Practice through the Virtuality of Architecture
William T. Willoughby, Kent State University

“Untitled_Space is infinite, open and ready for occupation. Its universal architecture, non-existent presence and indeterminate space offer room for numerous ideas and initiatives on a countless number of places.”— Toornend & Post, from www.untitledspace.net

Contemporary architecture must connect with the virtual. The global presence of digital space either generalizes the local places we occupy or dismisses the relevance of context. Architecture, which was once an agency of emplacement, now catalyzes a global sense of displacement. This essay meditates on various instances of the Untitled_Space project realized by Paul Toornend and Jelle Post.

Untitled_Space challenges the fundamental materiality of architecture by redefining architecture’s orientation to context and urban space. Untitled_Space questions architecture’s projection as a constructed reality. Untitled_Space has undergone 48 repositions, and seeks to be realized globally. The project was published by Toornend & Post with a collection of essays after the first 8 repositions in the book UNTITLED_SPACE (Amsterdam: Architectura+Natura Press, 2005). This essay returns to their representations and remedies the rife contradictions in Toornend & Post’s executed design.

The project is a virtual fabrication ideally conceived, imported to a real site digitally, and represented through photographs placed on exhibit or online. The resulting montages reveal a space that is at once uncannily real and remarkably dissociating. The project is an unacknowledged minimalist masterpiece of contemporary Modernism—transparency in and out, partial reflections in glass, mirrored projections, and reflective chrome (reminiscent of Brunelleschi’s perspective panel and mirror construct, the chrome-plated columns of Mies’ Barcelona Pavilion, Loos’ use of mirrors, Superstudio’s Continuous Monument, and most closely, the pavilions of artist Dan Graham).

Untitled_Space is a 21st Century “Glasarchitektur” that materializes absence while also sublimating its presence—a virtuality with implications upon the reality of practice.

What new possibilities arise when virtualized space connects to specific contexts? The sensorial complexity of real space appears enhanced when we experience the architectural representations of Toornend & Post. As a virtualized experience, Untitled_Space goes beyond any specific work of architecture to become a hyperobject that reorients us to any particular context, giving us fresh insights into a locale now known differently.

The major query of this essay can be summarized as such: Is architecture dispositional or contextual? Is architecture a disposition that alters a given situation? Or, is it possible to separate architecture from our perception of context? Architecture, whether virtual or real, is a projection that alters context. Architectural design always presents an alterity. New relations are formed by altering a context into something other than it was previously.

Architecture redefines the world projectively by transforming contexts. Is Untitled_Space a continual replacing? When re-placed into a site, its particularities are never the same. This essay uncovers the historical legacy behind the work in question and speculates on its future through the philosophical writings of Timothy Morton and Brian Massumi. Despite being an architecture of transience and semblance, the research project Untitled_Space becomes a transgressive practice that reforms the globally distributed sites it (un)settles.
Creating Hybrid Programs and Predicting Their Evolution through 4D Parametric Analysis
Michael Everts, Montana State University

Architects don’t know the future, they design it. Fundamental to this ability are understandings of causality, probability, change agents, systems of power, and visualization that analyze and predict probable futures. This paper presents a new interactive parametric predictive diagram for programming. It is a tool for enriching spatial arrangements and uses, not optimizing them such as deductive-logic programming matrices do. The diagram is demonstrated in the programming phase of a community engagement service-learning project for a non-profit organization that provides therapeutic recreational opportunities for people with disabilities.

Human resources and their well-being is a critical component in the performance of a client’s business plan. The successful use of resources is in direct service to the mission of the organization. Human resources, infrastructure and mission are the contexts of program. Designed creatively, programs can positively feedback into resources and institutional goals by morphing into activities that reinterpret and actively engage context. The capacity of a program to do this, however, relies on analyzing new relational possibilities. Seeing human resources as only employees in a leaned space excludes possibilities of customer participation in an offered service that in turn, expands the space of interaction into the community and consequently networks the mission. Semiotic squares are analysis tools that identify the paradigms that underlie typical relationships. They use a strategy of considering opposite connotations of paired concepts to create an expanded “field” of meaning. Traditionally, they have been used as 2D diagrams for deconstructing texts. They demonstrate that something doesn’t have to be “one or the other”; it can exist at a distance between one and the other.

The new analysis diagram uses semiotic squares to register the performance of a program on three levels: human resources, infrastructure and mission. An interactive equation, within the diagram, uses numeric sliders to dynamically rate the performance on each level. The ratings show up as ellipses defining areas of probable performance. The human resources and infrastructure categories are placed on top and bottom, creating a 3D reference area for the mission-to-program performance to be visualized in. The interactive controls can adjust the height and pitch/yaw of the center visualization, giving control to how the three levels relate. A sinuously shaped surface links the rated metrics for resources, space and use. It can be animated over time (4D) to test evolutionary developments of program. As a communication and discovery tool, the diagram can be rotated to the side to see one set of relationships, the top view for another and as an isotemic view for even more understandable understandings of program.

The move to a service society has shifted the attention of architectural clients from the complexities of physical space to the complexities of abstract structures in virtual space. Focus on the development of social networking and computer programs leaves in its wake a growing inattention to spatial quality, programmatic combinations and infrastructure. Turning predictive technologies back on the conditions that bore them can prompt more advanced architectural services and design directions.

A Global Paradigm: The City of 7 Billion
Joyce Hsiang, Yale University
Bimal Mendis, Yale University

This paper reflects the conceptual thinking underpinning the research project, the City of 7 Billion, which was awarded the 2013 AIA Latrobe Prize:

The City of 7 Billion positions the world as one city. It presents the idea of the world as a totality of urbanization without boundaries, drawing upon and extending a lineage of thinking, drawing and modeling at the global scale. The paper examines this urbanized sphere, not just as a virtual or physical idea, but also as an intellectual paradigm—a way to think about and remake the world.

We live in the City of 7 Billion. With the speed of inevitable urbanization, the world is emerging as a continuous metropolis. Urbanization is the crystallization of the continual process of human development. Its evolution mirrors the process of globalization itself, where boundaries have been dissolved through increasing interdependence and systems of exchange. Operating at the scale of the world has never been more urgent as crises and opportunities increasingly disregard city and national borders. New paradigms are needed that begin with the world as the singular unit of measure, from which design thinking and practice can build on the global stage.

The City of 7 Billion understands, conceptualizes and projects the world as one city: a complex network of exchanges, flows, and interconnected systems. Traditional paradigms for organizing the world follow increasingly irrelevant divisions—nation-state boundaries, the urban-rural dichotomy, or the East-West divide. As cities increasingly rely on a much larger distribution of agricultural land use and pasture, it is no longer sufficient to examine the city within its conventional limits to truly examine the impact of the urban condition. Nor is it adequate to approach global problems through fragmentary analyses and research.

It is essential to situate the development of new techniques and models of the world within a long lineage of global paradigms and world makers. From Ptolemaic cartography to Kant’s philosophy of a world government, “Volkerrecht,” and the utopian projects of Superstudio to Buckminster Fuller’s “Dymaxion Map,” historical models of the world have always been the products of design thinking. Architects, cartographers and philosophers alike have contributed to the diverse histories of what the world is and can be. A common ambition was described by C. A. Doxiadis as the need to move beyond merely utopia, or “no place,” to an antropia, or “in place.” His model of the world was not searching for the ideal, but rather the cumulative reality that humanity builds. It is this inevitable reality that confronts us today, a total sphere of urbanization.

Most significantly, The City of 7 Billion presents a new paradigm for practice. It is an antidote to fragmentary analyses and arbitrary boundaries, and illuminates the pivotal role that architecture can play in global issues by envisioning the world as the ultimate design problem.
Ghost Density: Post-Industrial Economies and the Spatial Avatars of Super Wealth
Matthew Soules, University of British Columbia

In a 2011 New York Times article, Sam Roberts reported on Manhattan: "[w]ealthy out-of-towners have always had pieds-à-terre and unused investment properties in the city. What is new is how many."(1) There are innumerable similar reports describing emergent conditions in ‘global cities’ throughout the planet. Inner London is being remade at the behest of wealthy property owners from around the world who rarely occupy their properties. Vancouver’s central core has large tracts of new condominium towers that are bought but remain largely empty. New cities in China have hundreds of thousands of units that are purchased only to sit vacant as investments for the burgeoning middle class for whom investment opportunities are limited to real estate because of national regulations – these cities have garnered an eerie name: Ghost Cities.

This paper examines phenomena that present a spectral double which lurk largely under the radar of paradigmatic methodologies that emphasize rapid urbanization vis-à-vis population growth and economic expansion – namely, the ways in which contemporary capitalism exacerbates the super-wealthy and their impact on the form and function of urban environments in cities widely understood to be attractive for the acquisition of real estate assets. Rendered apparent in various global city indices, these anointed destinations for super-wealth capital include the usual suspects of New York, London, and Tokyo but also extend profoundly into ‘new’ frontiers such as Beirut, Tel Aviv, and Stockholm. This paper reveals the degree to which the numbers of super-wealthy individuals are rapidly expanding through the economic dynamics of globalization and as a result are exerting outsized influence on the material configuration of post-industrial architecture and urbanization, thereby producing what can be called a Ghost Density.

Contemporary research and practice epistemologies typically coalesce around either discourses of growth or decay – rallying around the Pearl River Delta or Detroit, each functioning as talismans for their respective methodological world-views. This paper offers a counter position to these polarities that typically frame research and practice – instead advocating a more nuanced yet radical agenda that is attuned to the surprising realities of post-industrial capitalism and its uncanny urban materialization. In other words, this paper traverses the ways in which the post-industrial city incorporates hollowness, vacancy, and instant decay into its very modes of expansion. This is a methodology of research and practice that is hard-core in its integration of interdisciplinary knowledge from fields that are typically considered ancillary, at best, to the primary core of architectural agency. Specifically, this paper seeks to recast the disciplinary knowledge of real-estate, finance, economics, and government policy as the locus of a new paradigm of inventive critical research and praxis which is uniquely suited to the post-industrial city. From this radically interdisciplinary vantage, the manifestations of ghost density come into focus and afford new terrains of architectural agency.

Resilient Communities: Design Strategies for Healthy + Sustainable Environments

Daniel Friedman, University of Washington
Sun-Young Rieh, University of Seoul

Existing Low-Income Settlement Morphology May Provide a Community Inclusive Mechanism for Slum Redevelopment
Tasnova Iqbal, Independent Scholar

In a condition of extreme poverty an unquenched need to generate income consequently causes distress migration from rural areas to cities. They compose the highly saturated poverty stricken slums referred as informal often illegal settlements with very low living standard deprived of basic human rights. These congested settlements generate an unhealthy environment. Despite being prone to harsh environmental conditions urban slums display resilience.

The question posed is, if the denizens has their current standard of living by choice or is it the socio economic context that compels them? They are suppressed by the economy they serve being exploited with minimum wages. Due to low literacy they get trapped by irrational business ventures and creditors to get engulfed in a vicious cycle of aggravuated events and loan repayment.

These sporadic settlements grow near natural resources such as water being dependent on it but often maltreating the water. These organic development erected from basic human needs could be termed as, “rural settlement in the urban morphology”. The grammar of their infrastructural synthesis may instruct the contemporary architecture to use minimal services and encourage optimum use of a multi-purpose space. The placement of facilities and dwellings in slums unintentionally create an inviting courtyard. These contained spaces provide for the use of a multi-purpose space. The placement of facilities and dwellings in slums unintentionally create an inviting courtyard. These contained spaces provide for ventilation, cooking, playing and social gathering. The rural skills employed delineate a pattern to sustain life in adverse conditions using local and available, cheap, renewable and environmental friendly materials. The one storied residences creates an urban void in the surrounding concrete urban jungle of apartments.

The Modus operandi will work parallel to the agents of change. It proposes to unfold the interiors into the surrounding with an open plan. An approach should be initiated to give the inherent grammar a direction. The metamorphosis should unfold the interiors into the surrounding with an open plan. An approach should be initiated to give the inherent grammar a direction. The metamorphosis should not be imposed to harsh environmental conditions urban slums display resilience.

24/7 Lifestyle and Chronobiology of New Open Cities
Aki Ishida, Virginia Tech

“As the most private, most vulnerable state common to all, sleep is crucially dependent on society in order to be sustained.”
- Jonathan Crary in 24/7: Late Capitalism and the Ends of Sleep

In the new post-industrial cities, there is a great disconnect between our body’s circadian pacemaker which controls many of physiological and metabolic functions, including sleep, and the 24/7 lifestyle incubated by these cities. Efforts of massive scales are being made in cities such as Songdo International Business District (SIBD) of Incheon Free Economic Zone in South Korea and Suzhou Industrial Park (SIP) in China to make the greenest possible cities through integration of open green spaces, bike lanes, and recycling programs. However, the lifestyle of service sector jobs, with increase of overnight-shift work and the ability and desire to be in constant communication between different time zones across the globe, place a great strain on human body’s natural inclination to maintain its circadian rhythm. In a work environment that operates across time zones, the temporality of our built environment is no longer in sync with the solar cycle as those of the farmers and factory workers in the pre-Edison era; in new open cities, chronobiology of the cities is guided by the human sleep cycle that is under constant attack by our 24/7 culture.

Before digital technology gave rise to the new open cities, industrial technologies already shifted the chronobiology of buildings. The introduction of electric light almost overnight changed the temporal nature of architecture by making buildings habitable all hours of the day. Advancement in float glass manufacturing and lamination technology made maximum transparency of building skins with uninterrupted panels of glass affordable and expected not just in corporate offices but also in bedrooms of urban condos, penetrating light day and night into the private domestic spaces of sleep.

The green features of LEED certified buildings may do little good for people who are chronically sleep-deprived or are awake when their circadian clock is signaling their brain to sleep. Steve W. Lockley and Russell G. Foster, both neuroscientists and experts in sleep medicine, note that night-shift workers have a great risk of accidents, injuries, and long-term diseases. Many high profile accidents occurred at night: Exxon Valdez (midnight), Chernobyl (1:30am), and Three Mile Island (4am).

The timing and quantity of sleep that in the past were regulated by the sun are no longer present naturally in new post-industrial cities. For a city to be sustainable, its inhabitants’ sleep must be actively protected. Automated window shades and dimming of interior lights have become a standard problem-solver, and learning to change one’s behavior to get sleep at the right time, in the right setting is another solution. At the same time, the skin and organs of the buildings, as well the lights that illuminate cities at night, could also be designed to encourage deceleration and actively engage the most important cycle controlled by the circadian pacemaker, the light-dark cycle associated with the solar system.
Resilience: Scaled Strategies for Health
Susan K. Rogers, University of Houston

The neighborhoods where we live impact our chances to live healthy lives. In cities across the globe the distribution of resources and the quality of our built environments, public spaces and neighborhoods are not equal. The socio-economic context of our neighborhoods—income, housing, education, and employment—is more often than not directly correlated to the health of the people that call them home. Some neighborhoods have plentiful fresh food options while others are food deserts, some neighborhoods have well maintained parks while others do not, and some neighborhoods thrive while others decline.

This paper presents the research, analysis, collaborations, and interventions that were developed over the course of nearly two years of study and in partnership with the Department of Health and Human Services and over a hundred residents and stakeholders in four neighborhoods. The project had two goals, first to identify the determinants of health that can be impacted by community design; and second to explore the role of small-scale, low-budget design interventions with the potential to create big change.

Seven strategies for building healthy communities were developed that directly link the quality of the built environment, design and health: education, economic opportunity, safety, public space and amenities, neighborhood stability, food security, and environmental justice. The strategies are based on a “thick” investigation of the conditions in the studied neighborhoods—for example the relationship among educational attainment, median household income, and obesity rates—and a further analysis of systemic connections.

We found that parks and open spaces, bike infrastructure, and community centers were important indicators of health. Access to healthy food, or food security, is equally important. We looked at new single family housing permits to understand locations of and constraints to new development in our four neighborhoods and across the city. We proposed joint-use schools as a means to expand services for children and families, increase opportunities for physical activity and healthy living, and provide additional educational, cultural, and civic uses by capitalizing on existing built environments. We created a networked plan for public space utilizing utility easements and right-of-ways to connect all of the primary destinations in the neighborhoods, increase neighborhood stability, and greatly increase physical activity. Overall, we looked at the interconnectedness of both the existing conditions and opportunities for neighborhood transformation, working to develop synergies between the seven strategies, and across the interventions.

As a means to support community-led transformation and smaller scale projects we are also developing a healthy action project toolkit—a series of scalable design projects that can be implemented in other neighborhoods and other cities. These smaller projects require minimal infrastructure or investment and have a clear impact on the health of a community and its citizens. As more and more resources are expended on addressing individual health problems instead of understanding how the larger environment effects our health, this project is one example of working proactively to ensure that all of our communities and the people who call them home have an opportunity to be healthy.

Sites and Services from an Architectural Perspective: A Case Study in the Dandora Community
Glen Wash Ivanovic, Xi’an Jiaotong-Liverpool University

The present research is focused on an architectural reevaluation of the Sites and Services schemes implemented in the Dandora community, located in the eastern outskirts of Nairobi, Kenya.

The Sites and Services approach is a well-known set of principles and steps aimed to provide housing to low-income people in developing countries. The core characteristic of the Sites and Services was the inclusion of the low-income potential householders in the process of implementation and construction of their houses. Basically, government agencies were to provide a plot of land and the essential urban infrastructure (roads, electricity, water supply, etc.) while the design and construction of the houses was the beneficiary’s responsibility, assuming that the promise of land tenureship or ownership would encourage and stimulate the success of the self-building process. This approach was strongly promoted by the World Bank, which provided financial and technical assistance to local governments in developing countries for its implementation. Several countries in Asia, Africa and South America were engaged in Sites and Services projects during the late seventies and eighties, when the approach became a paradigm for solving the slums and squatters problem. While these projects needed specific strategies and modifications for adapting to the particularities of the places they were implemented, they always incorporated different degrees of collaboration between the local government and the beneficiary.

Today, many of these projects are considered unsuccessful. They were actively revisited and reevaluated soon after their implementation, and it is generally agreed that, because of many complex reasons, Sites and Services had a number of shortcomings during its execution.

The Dandora community in Nairobi is often cited as an example of these shortcomings, usually because most of the beneficiaries of the project moved elsewhere, either selling or renting the received plots without actively engaging in the construction of the houses. However, most of these reevaluations were done during the late eighties, and from a housing policies perspective. Since then, Dandora has received little attention, especially in terms of the resulted architecture and the communities which have produced it, regardless if they are the original owners or not.

For this case study, we revisited a specific area of Dandora phase one, which is regarded as the one with the best environmental quality both by local authorities and residents. We recorded the actual state and planning of the self-built houses, while also interviewing the current tenants, aiming to identify the pros and cons of the resulted typologies.

The analysis shows that, while there are indeed shortcomings for the Dandora project, it still has produced unforeseen and positive results, yet still valuable on an architectural and communal level, which could be used for future developments in collaborative design and approaches to the slum and housing problem.
Restoring Connection to Place: Physical and Social Factors in Neighborhood Place Attachment
Aliaa Elabd, Alfaisal University

Many urban neighborhoods in post-industrial cities are characterized by patterns of loss of people, investments, and most importantly loss of connections to place. Revitalization efforts usually focus on a mere restoration of the physical aspects of a place. However, restoring the psychological aspects or connections to place can be crucial for robust resilience and stability. This connection to place symbolized in constructs such as place attachment, which has been shown to relate to the resilience, stability, livability, and regeneration of neighborhoods.

Place attachment as a multi-dimensional construct incorporates several aspects of people-place bonding and many inseparable, mutually defining features. It measures the affective ties that occur between individuals and their meaningful places. Place attachment is nourished through the daily encounter with the built environment and its users. Place attachment research has previously emphasized the social and phenomenological perspectives of attachment. However, earlier studies lacked a focus on the relationship between the physical features of a neighborhood and the generation of place attachment. As a result, the role of place attachment in design theory and practice has been neglected.

Working from Fried’s “Grieving for a Lost Home”, this research contends that the physical environment and its features have an effect on place attachment through a complex modeling of indirect symbolic meanings. It hypothesizes that a group of physical, social, and demographic variables are associated with place attachment on a neighborhood level. Through investigating four urban neighborhoods in Durham NC, this case study research utilizes multiple research methods, including questionnaire, interviews, and GIS. The study has discovered that the participants’ positive perception of specific physical and social features is associated with increasing levels of place attachment on a neighborhood level. These features include neighborhood location; street quality, walkability; amenities; parks, communal activities and satisfaction.

Measuring Urban Resilience: People-Place Relationships in Sustainable Communities
Aliaa Elabd, Alfaisal University
Celen Pasalar, North Carolina State University
George D. Hallowell III, North Carolina State University

For the last half-century, Marc Fried (1963) and generations of other researchers have found that people-place relationships, such as place identity and place attachment, are fundamental to human functioning. These complex socio-spatial frameworks are essential to welding an array of physical streets into a loose sense of community (Fried, 2000). Studies have also shown that place identity is related to increased levels of stability, livability and resilience. Place identity is a multi-dimensional construct incorporating several aspects of people-place bonding and various mutually defining socio-psychological characteristics. Research suggests that the strength of the connection to a place is determined by its social amenities, residential choices, local social networks, individual needs, and personality styles. However, most previous studies have lacked a focus on the relationship between the formal and spatial environment of a neighborhood and a resident’s sense of place identity and attachment. Earlier research has postulated that connection to a place is generally a manifestation of attachment to people and social networks and not to the physical place itself or its features. As a result, connections between measurable physical characteristics and socio-psychological place identity metrics are vague at best, and the role of place identity in planning theory and design practice has been sorely neglected.

Using data derived from a broader research project, this study aims to understand and analyze a portion of Raleigh, NC in formal, spatial and social terms. The larger project: “Uncovering Southwest Raleigh” was focused on understanding current and future forces affecting change and to develop strategies to enable the residents of the Southwest quadrant of Raleigh to enhance and promote a healthy, creative and economically sustainable future for the district. The primary goal in the current study is to discover the physical measurable characteristics in the built environment that relate to nurturing socio-psychological aspects, such as place identity, on a neighborhood level. It is the intent here to broaden the understanding of the relationship between a neighborhood’s physical and social characteristics. This study utilizes a well-established and developed socio-metric, the five-point Likert Urban Identity Scale (UIS) and various measurable physical characteristics of a neighborhood. Data derived through this exploration are analyzed using a correlational approach and multiple data collection techniques are incorporated, including an extensive survey instrument, interviews, and GIS mapping procedures.
Building Resilient Communities in the Aftermath of Natural Disaster: A Demonstration Home in Joplin, Missouri
Nancy Chikaraishi, Drury University
Traci D. Sooter, Drury University

Our cities of today and tomorrow need to be built more sustainably to withstand the devastating effects of natural disasters. In the news each day, we see the deadly effects of disasters impacting communities across the globe. Typhoons, hurricanes, earthquakes, tsunamis, wild fires and tornadoes are leaving hundreds to thousands dead, injured or displaced without homes. Businesses and communities are destroyed and rebuilding is slow. Construction techniques often repeat the same mistakes leaving exposed a vulnerable community for the next disaster.

On May 2011, Joplin, Missouri, located in a tornado prone area of the central plains in the United States, sustained an EF-5 tornado that left 161 people dead and destroyed over 7500 homes and 800 businesses. Through a partnership with a school of architecture and a unique non-profit whose mission is to educate communities on sustainable building practices and life style, students designed a disaster resilient demonstration home and bed and breakfast. The Eco-Home employs disaster resilient and sustainable products and practices. An innovative building material was used to create a wall system able to withstand impacts up to 250+ miles per hour. This approach not only will sustain lives, but will protect the entire structure and greatly reduce the volume of projectiles during the storm, subsequently reducing the debris field and the load on storm related landfills.

The Eco-Home serves three distinct functions for the client. It houses the offices of the not-for-profit, it is an educational center on sustainability open to the public and the bed and breakfast gives those seeking the opportunity, first-hand experience of living in a sustainable, net-zero home. This complex program along with the goal of creating a net-zero disaster resistant structure and working with a real client proved to be quite challenging for the students.

While the demonstration home was specifically designed for its location in “tornado alley” in the mid-western United States, concepts and strategies used in the design can be applied to the diverse natural disasters that are occurring so frequently across our planet. This presentation will discuss best practices for responding to the impact of climate change through disaster resilient design and will present innovative resilient building materials and construction practices.

Misi-Zibi: Living with the Great Rivers, Climate Adaptation Strategies in the Midwest River Basins
John Hoal, Washington University in St. Louis
Derek Hoeferlin, Washington University in St. Louis
Dale Morris, Washington University in St. Louis

The Mississippi River is the longest river in the USA, 4th longest in the world, and drains 31 states (41% of the US landmass) and two Canadian Provinces, and together with the Missouri, Illinois and Ohio Rivers has for centuries been a conduit for cultural and economic exchange throughout the North American continent. These rivers are also ecological treasures with the Mississippi River. But the rivers are under stress.

The 2011 Mississippi/Missouri floods throughout the Midwest, followed by the 2012 Midwest drought and once again the 2013 floods, demonstrate that increased climate variability across the Mississippi river basins cannot be ignored over the long-term. Extreme weather has a direct, and often negative, impact on the river’s functioning and adjacent land-use’s, and thus also the Mid-West’s ecology, economies and communities. Increased climate variability may mean more frequent extreme weather throughout the Mid-West. More floods and droughts demand that stakeholders along the Mississippi and Missouri River system adapt at-risk communities, ecologies and economies to this uncertain future. The challenge – along the Mississippi and Missouri Rivers as in California’s Central Valley, throughout Europe and Asia, and elsewhere – is one of design: to create and promote sustainable, healthy river systems that enrich local communities, drive local economies, and provide key ecological services up and down the river system.

MISI-ZIIBI was the first in a series of multi-disciplinary workshops that investigated spatial design strategies through the studying of innovative, integrated approaches for climate adaptation and sustainability along the Mississippi and Missouri rivers in the Midwest. Initially focusing on the St. Louis region, the first workshop outcomes were a broad-based set of proto-typological, multi-scaled planning scenarios worthy of more detailed study and intended to be transferable to other Midwest regions.

The workshop approach brought together multiple disciplines of Dutch and American participants in an interactive design-based setting. The participants will seek input from local stakeholders and communities to ground the work in the specific realities and existing initiatives already at hand. The workshop intends to foster a new dialogue about both policy and design along the Mississippi and Missouri Rivers in the Midwest in relation to climate change and weather extremes, as well as the changing functioning of the river economically and ecologically and what this means for the adjacent communities.

The workshop products were a series of scenario-based and scalable design strategies that will investigated possible prototypes for integrated and sustainable models for land-use planning, flood-risk-protection, community and economic resilience, drought tolerance, ecological benefits and sustainable design developments along Midwest metropolitan river regions. MISI-ZIIBI asked groups to work at the St. Louis regional scale, in addition to various fluvial zones that included agricultural, suburban and urban typologies. The intent was these areas of study reflected overall conditions transferable to other Midwest city-regions. The graphic-based outputs of MISI-ZIIBI will aid the community, stakeholders and government officials as they develop ways to respond to the MISI-ZIIBI’s climate challenges.
Avoiding “Compulsory Automobility” in Asia’s Open Cities
Cotten Seiler, Dickinson College

Veritable lakes of ink have been spilled over the past hundred years celebrating and bemoaning the politics, environmental, social, and psychological effects, industrial culture, and technological development of driving machines. Since 2000, however, many scholars, journalists, and popular writers have delivered newly compelling reevaluations of “automobility”—a normative practice, mode of subjectivity, and built environment organized around driving—from a range of disciplinary and philosophical positions. This critique of automobility has gained traction among urban planners and architects around the world, especially as more nations install automobility on their urban and suburban Owing greatly to colonialism and the postcolonial dominance of Western planning models, automobility has shaped the built environments and residential and work patterns of the cities of Korea, Malaysia, and Japan, to name just a few nations. Given its prominence as an index of a nation’s political and economic modernity, and the empowered “freedom” of its citizens, it comes as little surprise that in recent decades automobility has also begun to be established in developing juggernauts India and China. Perhaps, however, these nations come too late to automobility for it to colonize the physical and cultural landscape to the degree that it has in North America and other locales, where the practice and built environment of automobility has a compulsory character. For even without the clear limits to petroleum stores and the planet’s capacity to absorb toxins, population growth and other factors would eventually reveal a paradox: once it has saturated an environment, automobility’s power to produce the affect associated with modern freedom, as well as its social and economic utility. In the United States, most drivers’ experiences contradict the ceaselessly broadcast imagery and rhetoric of liberation, empowerment, and distinction still plied by the auto industry, popular culture, and most policymakers. But that vision is still seductive, especially in the rising car culture of China, where landscapes of compulsory automobility are proliferating within and on the outskirts of the largest and most affluent cities. The 62-mile, 12-day traffic jam on a highway into Beijing in 2010 was a stark reminder of the sclerosis and “commuter pain” of so many Asian cities. Faced with a truly global automobility problematic, a number of scholars, architects, and urban planners are developing ways of seeing and structuring urban environments beyond the reign of the automobile. This paper explores how urban planning that resists or modulates automobility can facilitate the goal of the “open city” in Asia. Focusing primarily on the Chinese cities Shanghai and Guangzhou, I examine the more cultural and political-philosophical dimensions of automobility, in particular the tension between an individualistic, modern car culture and urban and exurban built environments that do not accommodate it. How have urban planners and architects working in Asia sought to reconcile the prerogatives of mobility that are modernity’s signature and the need to preserve (or produce) a dynamic, safe, and engaging urban landscape?
Architecture + Change in the Public Realm
Martha Thorne, IE University
Young-min Koo, Inha University

Future-Invested Urbanism: Beirut’s Shifting Society
Elizabeth Martin, Southern Polytechnic State University

Beirut is a city of complexities and contradictions. The tensions resulting from such a condition have exploded into violence throughout its recent history, most devastatingly in Lebanon’s fifteen-year long civil war (1975-1990), which was centered in Beirut, and marked the city in the international consciousness as a place of urban turmoil. However today, Beirut has recovered remarkably; it was voted the number one destination to visit by the New York Times in 2009, and, more recently, received a similar title by Frommers. The city is in the second phase of one of the biggest urban reconstruction projects in the world, city run by a single entity Société libanaise pour le développement et la reconstruction de Beyrouth known as Solidere.

Conceived of in 1994, Lebanon’s first postwar government run by Prime Minister Rafik Hariri was determined to turn disaster into opportunity through a unique form of public-private partnership. Creating a special zone, the Beirut Central District (BCD), the government commissioned its urban planning and formed Solidere, a private development corporation, in which the BCD’s former owners and tenants pooled their property assets in exchange for controlling shares, with new shareholders contributing the company’s working capital. Solidere was required to fund the relocation of displaced families, undertake the necessary clearances, construct the city center’s entire infrastructure and public domain, and carry out environmental reclamation and sea defense works on the new waterfront. In exchange for financing on behalf of government all infrastructure and land reclamation, the company was granted ownership of 29 hectares of new development land on the reclaimed area.(1)

Solidere has brought internationally known architects like Steven Holl, Herzog & DeMeuron, Zaha Hadid, Vincent James, Jean Nouvel, Sir Norman Forster, and Rafael Moneo to define post-war Beirut. In less internationalized parts of the city sit the landmarks of the 1960s and 1970s, Beirut’s pre-war glory days, including buildings by names such as Alvar Aalto, Victor Gruen, and Swiss Addor & Julliard, and more recently, projects by locally designed architects such as Bernard Khoury.(2) From one point-of-view, this building boom, which is turning Beirut into a forward-thinking, modern metropolis, is a sign of better times and peace. From another, it is a removal of the city’s cultural history by only looking at the city as a physical manifestation of future-invested urbanism.

Within many of these new projects, there is an interesting dichotomy at-play on how urban public and private space is used in Beirut between ‘day’ and ‘night’ in terms of: public/private; civil/uncivil; harmony/tension; inclusive/exclusive; peaceful/violent, and ecological/hedonistic. These dichotomies appear as endless and complex as the sectarian experience itself. By using Beirut as a case study, I am attempting to understand and document what brings life to a contested city, and ask how these might be designed to bridge cultures and enhance community.


Housing in China: Breaking the Bounds of Contemporary Urban Theory
Alexandra Staub, Pennsylvania State University

One of the largest economic drivers in current-day Asia is China, a country that has experienced double-digit GDP growth for most of the past decade.(1) With a centralized government still able to move mountains through policy, China’s cities have grown tremendously, both in terms of physical development and population. Although high-profile prestige projects, such as the buildings developed for the Beijing Summer Olympics in 2008 are the ones most often shown as the face of China’s new architectural allure, it is the country’s housing, an ubiquitous cultural need, that has most changed the face of the nation.

China’s housing typologies have changed dramatically in the past thirty years. Earlier forms evolved through cultural or political-economic demands: the one-story courtyard house (si¬heyuan) was based on centuries-old traditions of family and kinship structures, while the mid-rise work unit housing built under communist rule was an expression of a centrally defined socialist lifestyle. Current housing has become an expression of market-driven developer ideals, with the “sealed residential quarter” (fengbi xiaoqu) having become China’s predominant new housing form. While some of these quarters, also called gated communities, are modest retrofits of older housing stock, others are lavish estates, with luxurious infrastructure for residents who can afford to live there.

Scholars are in disagreement over what role this housing plays for the new China. Some point with dismay to the growth of the new luxury estates, the manner in which they divide and swallow urban space, and the class stratification their restricted access creates. Others consider the idea of “gated space” a historically based and thus natural evolution of vernacular Chinese housing forms. Most agree that while the gated communities resemble their counterparts in the West in many ways, Western spatial and social theory can explain neither the gating trend that has taken Chinese cities by storm, nor its consequences. The phenomenon of the “sealed residential quarter” and its implications for the Chinese city thus remain altogether under-theorized.

This paper examines a range of studies (including the author’s own) that have examined China’s new, gated communities at various scales, and overlays them with existing urban theories, most of which have been developed in the West. Preliminary findings in the authors’ own work show that contrary to what is commonly assumed, people’s use of urban and privatized neo-urban spaces in China is in many ways similar to the use of such spaces in Western contexts, yet that important differences also exist. This lends support to the idea of a “globalized urban identity” and the need to re-think how such urban spaces are being created in China today. In part through a rapid advancement of new urban structures, China as well as much of the rest of Asia has remained marginalized in the theorization of how urban space is created and used, with much of the literature still centered on Western models. This paper contributes to a vital expansion of the current debate.

Dubai 2020: Mega Malls and Spaces of Post-Postmodernity
Mohamed El Amrousi, Abu Dhabi University
Paolo Caratelli, Abu Dhabi University
Sadaka Shakour, Abu Dhabi University

Dubai’s hosting of the 2020 Expo further authenticates its status as an example of an emerging post-postmodern Arab city that is heavily founded on fragmented urban-scapes, enclosed enclaves shaped by an architectural fabric of the spectacle. A dreamscape for many, it represents a revival of the ‘No-Stop-City’, as highlighted by the Italian group of architects Archizoom Associati in the late 1960’s, a city where the customary practice of mass-commoditization and consumption reaches its pinnacle. Dubai’s themed mega malls such as Wafi City Center, Ibn Battuta Mall and Dubai Mall are further complemented by its ‘Global Village’ that profiles the consumption of culture and commodity within theatrical backdrops that attract millions of visitors. The hyper-reality of Dubai’s spaces and facsimiles of Chinese Pagoda’s, Pyramids, Parthenon’s and Babylonian Gates constantly revisit and reinvent the Exposition Universelle and a Display of the Orient as outlined by Zenep Celik within a contemporary context. (Celik, 1992). Dubai represents part of a network of cities that have adopted integral parts of the globalization process such as shared interdependency global imaginary and iconic projects. (King 2004) A post /non-industrial city that managed to survive the 2008 economic crises and retain its vivid image through its towering Burj Khalifa, artificial Palm Island(s) and Burj Al-Arab, all of which made international headlines through their lavish display of fireworks in celebration of the 2014 New Year’s Eve and acquisition of the 2020 Expo. The 2020 Expo is expected to reinforce the image of Dubai as a city of hybrid architectures and new urbanism, marked by technologically advanced infrastructural systems. However, there is more to Dubai than signboards and hyper-real imagery, as highlighted by Florentine group ‘Superstudio’, Dubai probably represents the closest realization of the utopian manifestations of Super-Modernism, a living proof of a contemporary revival of a post-modernist dream, a promise of better living for its expatriate community(s) through its gated dreamscapes that create an all inclusive luxury at an affordable cost for a new generation of transient globalized bourgeoisie. This promise is further accentuated via miniature-urbanscapes in Dubai’s annual expositions such as INDEX-the International Interior Design Exhibition, and ‘CityScape’. This research revisits Dubai’s spaces of exhibitions not only as spaces of consumption but as holistic urban enclaves of plurality, heterogeneity and complexity shaped by global agendas. This paper studies Dubai’s themed shopping-scapes such as its Mega Malls, Global Village, INDEX and CityScape exhibitions as forms of realization of the ‘No-Stop City’ advocated by Archizoom Associati, and the power of these exhibitions in shaping Dubai’s architecture and collective memory and cultural identity.

Race, Rights, and Housing Design for Refugee and Asylum Seekers in South Africa
Patrick Lynn Rivers, School of the Art Institute of Chicago
Kai Mah, Laurentian University

In a 2012 court filing, the South African government revealed plans to more closely control the movements of refugee and asylum seekers within its borders. The draft proposal entails extensive provisions for housing new arrivals in “camps”—basically mini-cities housing up to 20,000 people that are understood to satisfy South Africa’s treaty obligations and fall within international standards. (These “camps” represent a departure from the previous housing scheme in which new arrivals have been allowed to seek integrated housing (“urban integration”) amongst the South African public.) In addition to international standards, government must comply with South Africa’s own constitutional standards, which, given the country’s apartheid past, requires that the nation wrangle with its own values and ask just what it means to detain and segregate humans in what is a most physical state of exception. In this project, we specifically concern ourselves with the ways that the variability of the political processes producing standards and norms for the provision of “camp” housing for refugee and asylum seekers interfaces with design processes that state agencies like South Africa’s Department of Home Affairs and Department of Public Works must actively engage in order to elevate the architectural to the political and policy imperative and vice versa. Using South African public documents and drawings, documents and drawings from multinational entities like the UN and its High Commission for Refugees (UNHCR), as well as inputs from various activist groups and research organizations within and outside South Africa, we assert in writing and drawings that design can uniquely capture the tenor of the conversation about the “camps” and turn the “camps” into something other than a space of exception.
Allure: A Post-Industrial City from Elsewhere
Deborah E. Ryan, University of North Carolina at Charlotte

ALLURE, one of the most significant post-industrial towns constructed in Finland in the last five years, has received almost no architectural or urban design critique, and yet it involved 20+ architectural firms and now houses over 8,000 residents and provides on-site employment for over 2,000 people. Since its completion in late 2009, over 1.6 million people have visited the ALLURE, including planners from China and South Korea. Undoubtedly, ALLURE’s effects will be far-reaching and unprecedented. The Lynchian town structure of ALLURE includes seven districts each with a unique and vibrant center/node. There is a commercial/main street district and a city park wrung by 5-story residential buildings that rest atop restaurants with abundant outdoor seating. A traditional boardwalk includes a carousel, one of many landmarks that assist with navigation. The parks are all pedestrian. No vehicles are allowed inside the waterfront, gated community, where access is strictly controlled through gateways that break ALLURE’s distinct edges.

From a New Urbanist perspective, the high Walkscore town exceeds by offering access to recreation, medical services, affordable housing, economic opportunity, safe and distinct neighborhoods, all within a quarter-mile walking radius. From a standpoint of sustainability, solar energy is harvested and wastewater is treated on-site to potable levels before it is released.

Unfortunately, ALLURE denies its Finnish heritage and instead resembles a westernized town much like Leinberger’s WalkUPS. Although not a clone of another place like the Chinese cities of Tianducheng, Thames Town, and Hallstatt, ALLURE has the same sort of imitative, placelessness of a high-end, suburban mall. Further, the town largely ignores its context. Waterfront views are limited from most of the town’s public spaces and venues, and ALLURE’s lack of connection to the surrounding countryside is akin to Herron’s Walking City on the Ocean, a giant pod containing urban artifacts connected to other similar pods by retractable corridors.

“Utopia” is Greek for both “no place” and “good place”, or perhaps of an ideal place from elsewhere. While not a new paradigm for a global post-industrial city, ALLURE has the same sort of imitative, placelessness of a high-end, suburban mall. Further, the town largely ignores its context. Waterfront views are limited from most of the town’s public spaces and venues, and ALLURE’s lack of connection to the surrounding countryside is akin to Herron’s Walking City on the Ocean, a giant pod containing urban artifacts connected to other similar pods by retractable corridors.

In cities across the globe, temporary and bottom-up interventions for the activation of public space are proliferating. Reactive in nature, such interventions generally occur in response to urban vacancies and underused areas. Beginning as activist appropriations of city space by artists, designers, architects and locals, these short-term tactics have also become catalysts with their effects on the city space reaching well beyond their life-time and locale. While the phenomenon has been discussed critically with regard to its long-term gentrifying effect, on the positive side bottom-up urban interventions have often engaged a broader population in the production of urban space, and brought together a diverse community of people around shared interests. As temporary urban strategies are increasingly instrumentalized within top-down planning, architects find themselves confronted with a redefinition of their roles in relationship to these new participatory models.

The paper puts forward an investigation of what constitutes a ‘technology’ that is emerging from, and conducive to working in this context. Through the lens of contemporary technicism, new technological developments tend to be perceived as the drivers behind innovation in architecture and urban design. This paper considers the emergence of an inverse process: Architectural ‘technology’ - as the application of specific knowledge, methods and devices for practical ends - requires critical redefinition in response to this changing agent configuration in the production of urban space, architectural knowledge and the modes of its application are shifting and expanding - evolving between the poles of activism and entrepreneurship, between globally applicable techniques and extremely local involvement. This paper critically reviews architectural agency - and the methods and technologies employed - in relationship to three ongoing planning programs in San Francisco that combine bottom-up and top-down urban initiatives. It draws on a collaboration between architecture students, the local Planning Department, and a community partner within one of these programs to speculate on the tension between the global commonalities and local specificities that emerge in this new urban agency.
Designing an Open System: Indeterminate Boundary for a University Campus
Aslı Cekmis, Istanbul Technical University
İsil Hachhasanoglu, Istanbul Technical University

The new urbanism is associated with the concepts of uncertainty and complexity. Sassen (2010) uses the term “cityness” which is not a western notion of urbanity and refers to the intersection of differences. Conceiving cities as fuzzy logic systems will reveal the possibilities of the juxtapositions of different settings, which cannot be managed by applying the formal logic of planners. Cupers and Miessen (2002) stress that public space and urbanity is connected to “disorder, functional heterogeneity and diversity”. The urban public sphere can therefore be based on a model of confrontation and instability. Highly structured, programmed, and controlled spaces threaten the city’s public connectivity; its openness and unpredictability. Within the same tradition, the phenomenon of “open city” is built on the vision of ‘coexistence’. Diversity and dissonance breaks the homogeneity of closed systems. Change is assumed to be the fundamental issue in urban development, which characterises the open city as a flexible system. Sennett (2007) argues the elements of an open city: “passage territories,” “incomplete form” and “development narratives” — which if those three are incorporated is “democratic”.

In this study, the idea of open city is explored from an architectural perspective by designing a ‘boundary’ for a university campus in Istanbul, Turkey. Istanbul Technical University (ITU) campus is located on a 610-acre tract in Maslak (central business district of the city), adjacent to the city North South highway. The campus is surrounded by high-rise offices, residences, a big shopping mall, a five-star hotel, a sports centre and the stock exchange. The present condition of the campus where it meets the city is formed by a continuous wall of nearly one kilometre long which separates the private university property from the narrow pavement – the only public space which also has one busy subway station and bus stop. So, it can be acknowledged that there is a strict, ‘crisp’ border between city and campus. This problem of campus boundary in the context of open city is the subject of one of the design workshops of ITU, Faculty of Architecture. Students are expected to design the campus fringe as an open system; a boundary structure like a “wall,” which Sennett (2007) described as functioning much like a cell membrane; both porous and resistant. This barrier project is conceptualised as a multi-layered hybrid construction where infrastructure, landscape, open public space and a multiplicity of activities particular to the built environment and university merge (such as offices, research labs, exhibitions, displays, retail business, media-communication centres and accommodation units along with the areas for sport activities and recreation). This indeterminate-intermediate boundary in fuzzy terms is both outside and inside at the same time; as well as public and private. It is such an open system where people can freely participate; where resources and enterprises are available for everyone; and where, since the borders are blurred, the student, worker, consumer, visitor, resident and many other identities come together.


A Comparison of “Third Place” High-Density Residential Environments
Peter L. Wong, University of North Carolina at Charlotte

In 1999, Ray Oldenburg proposed in his book The Great Good Place, the idea of an emerging 21st century public realm that provides an alternative to public places normally associated with the ‘grand tradition’ (public places commonly associated with the piazza or town square as well as other civic meeting places). These new forms of the contemporary public meeting place, created from the rise of “creative class” lifestyles in America and Europe, have been attributed to the development of late-20th century capitalism and the casual relationship between private and public realms in architecture and urbanism. In addition, the acceptance of the role of under-represented groups have contributed to this redefinition of the public realm within the rising interest in business and the economic opportunities in the post-critical environment of today. An account of these changes has added to Oldenburg’s definition of what ‘good places’ are as the lines are blurred between spaces for home, and traditional public gathering.

The specific subject of this proposal, in conjunction with “third place” ethics, focuses on the fast urbanization seen today in East Asia. The quick pace of development has spurred high-density residential projects in cities (China and Korea in particular) leading to a lack of appropriate public places and open space. In addition, migrants from rural regions may engage such spaces differently than their city counterparts. Critical of these trends, this proposal attempts to track Third Place theory in the dense urban spaces of these high-density environments, comparing them with similar Western developments in the United States.

The research of the study is an attempt to sort the correlations between: the layout, use, and form of public spaces with the public’s impression of good city life, the spirit of place, and positive cultural amenities of the city. This comparative approach aims to examine the differences between Western and Eastern urban environments, and hopes to understand the relative success (or failure) of new Asian developments in view of their frequent adoption of Western planning models. This comparison will look at Wujiaocheng Town in Shanghai, China and Atlantic Station in Atlanta, Georgia for this purpose.

Based on relevant literature and first hand survey techniques, the research will classify the social activities in high-density residential areas, analyze their features and impact on social networks as well as the map the relationship between social activities and physical architectural form. In addition, it will explore the roots and mechanisms of sustainable space-forms based on socially rich environments based on “third place” theory.

1. Ray Oldenburg, The Great Good Place: Cafés, Coffee Shops, Bookstores, Bars, Hair Salons and Other Hangouts at the Heart of a Community (New York: Marlowe & Company, 1999). Oldenburg has defined the “third place” as environments that form in establishments that support informal activities, such as in cafés, bookstores, and other settings that people inhabit to be with others in order to work and/or to engage ad hoc social interactions.
Across the Metropolis: Metro as Change Catalyst
Arunava Dasgupta, School of Planning and Architecture, New Delhi

This paper captures the emerging trajectories of change in built form and public space within Asian mega-cities in response to large scale infrastructural inserts in the public realm that are potentially re-orienting the prevailing urban schema to a new trajectory of developmental state. More specifically, the paper focuses on the diversity of response in architecture and public space to rapidly changing mass mobility characteristics across the total cross-section of a metropolitan city-scape.

The ongoing Delhi Metro project is one of the most significant additions in the contemporary development scenario of the mega-metropolis of Delhi. As one of the fastest growing metro systems in the world, the sheer magnitude of such infrastructural retrofitting defies established planning directions in terms of scale of impact and consequent re-structuring. The metropolitan region of Delhi is yet to witness a catalyst of change as potent and as widespread as this new form of mass transit being added to its fabric.

Among the multiple dimensions of responses triggered by the Delhi Metro, the spectrum of change being induced in public spaces of the city offer a kaleidoscope of transformation patterns while provisioning a continuous, unfolding academic engagement with this dynamic process. Being primarily an elevated system, the alteration of built environment in contact with, and/or under influence of the new corridors of mass movement, both at the form-al and spatial levels through addition of new building types, emergence of hybrid models, erasure and replacement of past creations, re-organization and reformation of public domains.....reveal the complexity and diversity of change. Most of these changes are an outcome of spontaneous adjustments and adaptations, inter-dependence and innovations, rather than of any predetermined planning or design action.

Over the past few years, "Across the Metropolis: an exploration of Change" has been tracking the components, nature, process and significance of physical change in the public domain of this city-region. Covering the entire length of two primary metro corridors, East-West and North-South, this ongoing urban design studio revolves around selected station precincts, simultaneously unearthing the dynamic conditions of built form transitions in each of the local settings. Thus, from new global insertions at peripheral edge-cities to border zones between neighboring urban centers, inner city urban villages and further within historic city cores....the diverse spectrum of transformative forces operating at the entire scale of this mega-metropolis is under academic scrutiny and active design discourse.

The emergence of the metro across cities in this part of the world is not a new phenomenon. What is significant however is the spectacle of change that is consequent to such large-scale retrofitting in the prevailing post-industrial era of a globalizing society juxtaposed with existential realities of the complexity of urban life in such mega-cities. This is more so, when such an example of mass mobility (in more than physical terms) is being seen as the inevitable route to urban restructuring in all scales of cities beyond the metropolis.
Dubai [Metro]polis: Landscape Infrastructure and Urban Utopia
Nadia Mounajjed, Abu Dhabi University
Paolo Caratelli, Abu Dhabi University

For the last two decades, Dubai witnessed a dramatic urban transformation. Despite the financial crisis’ slowdown, between 2009 and 2012, this boom produced a unique and complex urban landscape that is often characterized by sophisticated infrastructures, skyscrapers, gated communities, man made islands, iconic buildings and long extended waterfronts. By winning the bid for Expo 2020, Dubai positions itself as a major metropolitan hub for the twenty-first century. Planners, land speculators, and environmentalists contemplate cautiously as the city prepares itself for the new Boom. Dubai puts on its dress to act once again as a laboratory for the future - a city of urban experimentation and utopia.

The proposed paper explores Dubai’s urban utopia and landscape infrastructure through the lens of its Metro System. The introduction of Dubai Metro marked the beginning of a new association between urbanity, mobility and modernity. Unlike Paris, Milan or Detroit, Dubai is a city without an industrial past and currently the only one in the Gulf to have a metro. Dubai’s ambition to act as a model for new emerging global cities in the post-industrial age is characterized with the birth of new forms of networks, communication, and transportation system to secure its position as a ‘Hub’. Understanding this urban transformation also requires comprehending the West’s urban crisis and how profoundly and conflicting it has influenced on Dubai planning ideas, as well as other influences from western architectural movements and theories.

Dubai Metro may be seen as a catalyst for urban change. The scheme weaves through the urban fabric and mediates within an often-fractured one (i.e. rural versus urban; old versus new; dense urbanity versus expanded fields). This welfare system is originally intended to connect and reinforce mobility, sustainability and equity (Ramos, 2013). The elevated railway path barely touches the ground and is mostly aligned to Sheikh Zayed Road and the super advertising billboards - running adjacent to major landmarks. It provides a signifier of modernity in public imagination, by drawing on the traditional association between train, speed and the city. Also the design of existing metro-stations exhibit parametric generative formal strategies, as they appear identical repetitive curvilinear blobs distributed within the space of the city. On the other hand, Dubai Metro acts as a modern tool to explore the built environment, providing a visual experience and an unprecedented perception of moving in space and time at the edge between the imaginary and the real. This unique experience we argue is very important to the vision of Dubai as it presents the city to the metro riders in the form of ‘a cinematic journey’ drawing on the analogy between filmed imaginary and architectural experience.

The study draws on contemporary cultural theory focusing on Dubai’s amplified environment and the metro (Stephen Ramos 2013, Tabetha Decker 2009). The research draws upon existing literature on the relationship between mass-transportation and the city, and their association with urban utopias (Paul Virilio, Gilles Deleuze) whose contributions are essential when exploring the relationships between urban space, mobility, and architecture.
A Parametric Vernacular: Genetic Algorithms in Urban Formations
Lee Su Huang, University of Florida

As urbanization accelerates across the globe, an increasing number of urban re-development projects are initiated to satiate the pressing need for housing. These occur commonly in the form of closed, gated mid-rise tower communities that break the urban fabric and become isolated islands in the urban landscape. Often lost in this process are the scale and the spatial continuity of the existing urban fabric, along with the cultural and social framework that it supports.

The vernacular architecture of a region offers time-tested methods of building formulated over centuries fine-tuned to deal with the specific climatic, spatial, and social conditions of the locale. While these labor-intensive building methods are generally ill-suited for adaptation by the industrial processes of modern construction, the insights that may be gained from analyzing the vernacular opens the possibility for alternatives beyond the adopted default solution that is the gated tower community.

The inevitability of urban redevelopment in these rapidly growing cities compels us to ask the following questions: Can we densify and modernize our cities without severing the urban fabric? What lessons from the vernacular can we learn and apply to these new developments, as a strategy to preserve the sense of place and city? And how can parametric design methods help us quantify, formulate, and optimize these strategic design frameworks?

This presentation will examine these issues through one case study on the building scale, and two case studies on the urban formation scale, which ultimately propose parametrically optimized alternatives. The first urban study is located in Shanghai’s Old Town, where multiple plots of land have been designated for redevelopment and 99-year leases sold to developers. The vernacular housing formation of the area is the Shanghai Lilong, a small-scale mixed-use housing block with perimeter commercial storefronts and an internal residential circulation system.

The second urban study is situated in the Bastakiyya district of Dubai, a historical district with multi-generational Persian-inspired vernacular dwellings. Of particular interest is the strategic arrangement of buildings, facade openings, and courtyards that help deal with the harsh climate, as well as the windtower, a passive cooling mechanism that is embedded within the dwellings and operates off of the prevailing coastal winds.

These projects implement parametric frameworks derived from the study of these vernacular housing formations, while identifying key parameters for optimization via genetic algorithms to breed, mutate, and evolve computational solutions based on key fitness criteria. These explorations of evolutionary algorithmic design strategies show that optimization tools can produce efficient non-intuitive configurations that may not have been discovered through conventional means. Simultaneously, these studies expose and clarify the underlying forces at work; ultimately the purpose of the tool is not to supplant the designer but to aid in the process of understanding design issues, and how they can be generative towards formulating a more refined solution.