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PARADOX IN DEVELOPMENT

Political Economy and Tehran's Socio-Spatial Transformation

Tehran never experienced the organic rhythm of development. This process along with changes in the economic and political conditions of the country has been the dynamic force of dramatic transformation of the urban socio-spatial pattern. This study seeks to address the contradictions, difficulties, and paradoxes that this transformation embodied. Economic prosperity resulted from oil income made possible the extensive program of urbanization and rapid growth of regional business. In the oil-based economy of Iran, the modern city was to facilitate new landscape of consumption adopted from western lifestyle and consumerism culture; in doing so, a revolutionary attitude and radical reforms was imposed on the traditional society in order to legitimize political power and accommodate commercial markets to make the city as a machine for profit. A new architecture and urban form were identified, with modern materials and a variety of patterns inspired from

the art of the past as well as modern influences. However, the dramatic changes in the city, was not an absolute departure from its past traditions, in many cases shows snapshots of paradox and introduces a hybrid form or a third Spaces of the past and present which are interwoven with each other in terms of both materiality and spirit. This study will focus on whose symbols –planned public spaces, city centers, mixed-use tall buildings– and their immediate urban context as well as in the broader metropolitan area where extrapolated at the focal point of Tehran's socio-spatial transformation.



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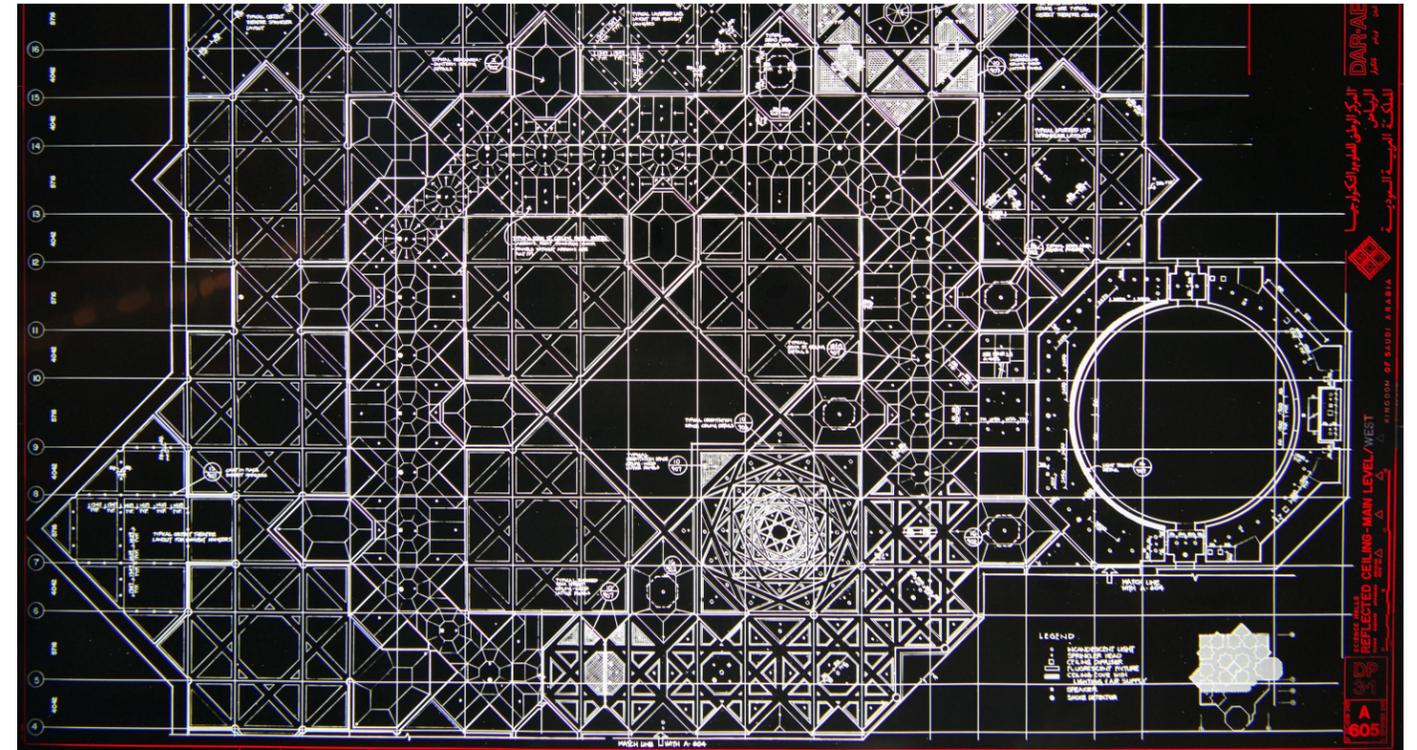
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MODERNISM IN SAUDI ARABIA

North American Exchange of Oil and Architecture 1963-1985

Facing the construction recession ensuing from 1973 energy crises, North American architects sought to find opportunities globally. This strategy was not unlike that of oil companies when they realized demand for oil for industrial nations is bound to increase. In both instances, the global point was Saudi Arabia which was among the chief architects of OPEC. The capital that flowed into Saudi Arabia following OPEC oil embargo was employed to embark on a major wave of modernization, predominantly at the hands of north American institutions. North American architect practicing in Saudi Arabia had to overcome serious technical and cultural challenges. However, the institutional and physical infrastructures laid down by American oil companies, north American architect found a more suitable environment for their practices in Saudi. Modernist Architect who were interested in revising the project of modernism and expanding its vocabulary, found an

interesting elements to work within the Saudi Arabia Context. Sandboxed from western media exposure, Saudi Arabia provided an experiential ground to explore matters of global practice, representation national identity, interpretation of varied regional subcultures with their own vernacular architecture. How modern architecture in Saudi is related to institutions, practices and influence of the Saudi-American oil industry? How that relationship and the practice of architecture in Saudi between 1960s and 80s translated to the practice and disciple of architecture? My dissertation explore these question within the charged socio-political climate of the period and the context of revision of architectural modernism.



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RIYADH: A NEW URBAN MODEL

An Alternative City-Making Process That Will Overcome the Urbanization and Globalization Challenges in Saudi Arabia

The purpose of this research is to identify new urban models for the city of Riyadh, Saudi Arabia. Riyadh is the capital city of the Kingdom of Saudi Arabia with a population of about 5.7 million and a total area of 1,300 sq.km (500 sq.mi). Moreover, according to the World Urbanization Prospects, the population of Riyadh will reach 8 million inhabitants by 2050.

The goal is to investigate alternative city-making processes that can overcome urbanization and globalization challenges. The research will analyze the contemporary urban planning and development processes of Riyadh. In fact, during the past half-century, Riyadh went through a rapid urbanization in search of modernization. As most of the cities in the Arabian region, Riyadh was planned based on western urban planning concept which was known as the Doxiadis Plan. Also, a major drawback was the exclusion of geographic context and local cultural values which should

be part of the urban development. Also, the research will question social, economical and political issues related to contemporary urbanization.

The main question is how a new urban theory can be drawn from the contemporary urbanism in Riyadh, and what are the future urban challenges and opportunities. The new model should be sensitive to regional urban form as a universal urban model is not applicable.



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RESEARCH INTERESTS:

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HIGH-RISE IN COM- FORT:

Enhancing the Performance of the Building Enclosures through Integrating the Passive Solar Parameters Towards Sustainable Vertical City, the Chicago Loop.

In the years of the pre-modernization, architects was designing a place for dwellers' comfort in natural ways. But, in the years between the First World War to 1980s, architects ignored the environment from the built-environment. So, the emitted carbon dioxide into the air became dramatically the permanent gradient of the cities. However on the eve of 1970s, the oil crisis warned planners to change the way of building a building. This time was reconciling of architects with nature took the vernacular lessons from the past and utilized them across whose designs. According to the US Energy Information Administration (eia) in 2013, "homes built in 2000 and later consume only 2% more energy on average than homes built prior to 2000, despite being on average 30% larger." This report clearly indicates the significance of the lifestyle conduction versus sustainable achievements throughout the last 3 decades. Although the ghost of the incorporation age and materiality culture is beyond than a shadow

to be immediately lightened, some efforts under sustainable attitudes are so thought-provoking to be tracked deeply for keeping whatever we could do. In carbon dioxide emission, the residential sector is located on top of the list of greenhouse gas producers (42%). To decrease the percentage, controlling the building envelopes through design solutions is desired. In doing so, the passive solar systems, solely, is not able to solve the issues in economical ways. So, integrating the technology into these systems applies a new method in creating the bigger matrix of parameters. This research aims to develop the methodologies have been initiated before to enhance the performance of the enclosures through passive systems in highly dense district of the cities. As the vertical urban legendary in the US, Chicago loop has been chosen for this study to share the outcomes with follower communities throughout the globe.



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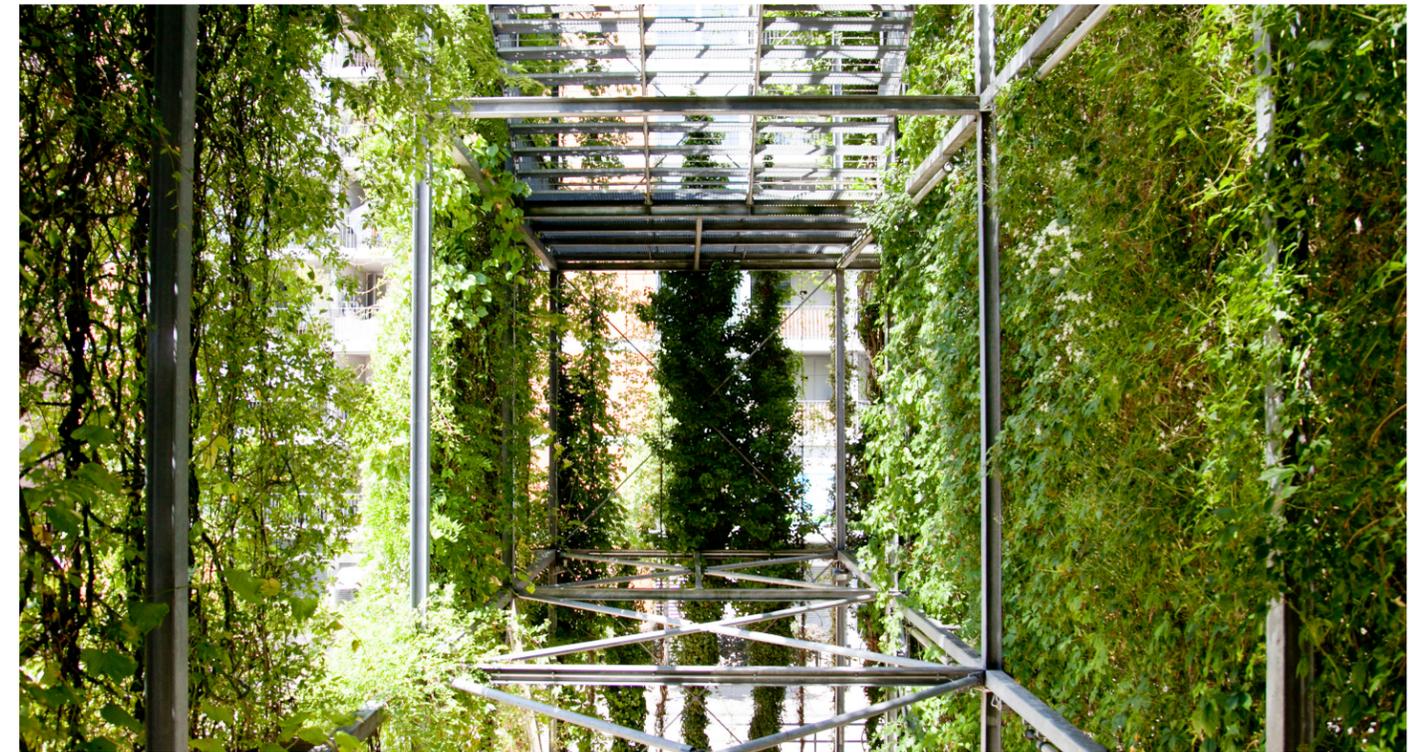
Vertical Vegetation, Living Walls, Biowalls, Green Facades, Hydroponic Plant System, Desert Climates, Building Envelopes, Energy Efficiency, Energy Simulation

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VERTICAL VEGETATION IN ARID CLIMATES

EVALUATION OF GREEN FACADES THERMAL EFFECT ON ENVELOPE PERFORMANCE FOR LOW-RISE RESIDENTIAL BUILDINGS

In recent decades, the population of cities and town of Saudi Arabia have increased significantly and with economical growth more buildings were erected. Despite the fact that, post 1940 the introduction of setbacks, buildings became more exposed to sun radiation. But together with the popularity of air conditioning in the early 1970's it caused electrical energy consumption to increase. High rates of energy use can be further explained by the poor performance of common building envelopes using concrete blocks and as reported by Saudi Electricity Company, 70% of the buildings not thermally insulated. Which leads to high cooling loads and the increased use of air-conditioning to provide the occupants with the desired level of thermal comfort. However, green facade is a type of vertical vegetation being less expensive to construction and efficient with irrigation. However, provides many benefits resembling in adding biodiversity, improving wellbeing, filtering air from contaminants, producing oxygen, giving edible produce, providing aroma, adding aesthetics, and finally lowering the sun thermal radiation effect on building and surrounding environment. This research focuses on green facades design strategies based on the best economical values a thermal insulation retrofit to enhance the building envelope performance on existing low-rise (one to three stories) single family home buildings in the arid climate of Jeddah. The city was selected as a case study because, it's the second largest city located in the western area in the most populated province of Mekkah. Also, the residences require cooling and air-conditioning almost all year around as Jeddah has low diurnal temperature variation due to low elevation and high humidity.



CYNTHIA VRANAS

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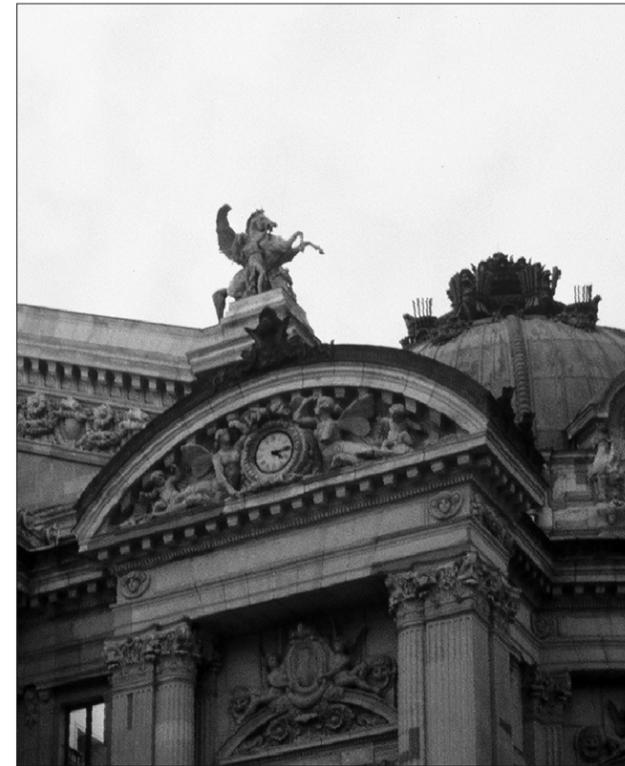
Architecture history and theory, The Arts and their interrelations, Rhythm, Perception

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THE ARTS AND THEIR INTERRELATIONS:

ARCHITECTURE, MUSIC AND DANCE IN THE 19TH C. FRANCE

Dance, music and architecture are distinct forms of art that have influenced and complemented each other throughout the centuries. Their paths of evolution have overlapped, dissected and diverged, and it's within their dynamic interrelations that we can gain important insights. They can reveal how political, social, economic and religious conditions can largely shape artistic expression, but they can also show us how the arts have influenced each other in profound ways. In the design and construction of the Palais Garnier (1875) we see all these dynamic interrelations come to life. Built during a time of great upheaval, the Palais Garnier reflects the social and technological advances of the age, but also displays dance and music's new emphasis on fluid lines, expressive emotion and the collaboration of many art forms to achieve a greater artistic result.

I believe this research will reveal important relationships between the arts, and unearth connections that have influenced their growth and stylistic changes. If we accept that behind a superior building, ballet or piano piece there is an organization – perceptual, emotional and constructive – it seems evident that tracing their evolutions and comparing their influences will sharpen our understanding of architecture and these arts. My hope is that this new information will encourage collaboration between artists, and address the way architects understand theater design (beyond a historical survey). My focus is on all aspects of theatrical presentation: stage and set design, lighting, acoustics, theater shape, and its décor, as a series of relationships influenced by dance and musical score – all of which can enhance the experience for the audience and the performer.



EZGI BAY

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DAYLIGHTING IN RESIDENTIAL HIGH-RISE

An Architectural Approach to Energy Efficient Building Design in Chicago Loop

Climate change has become increasingly apparent today. It is obvious that there is an effective relationship between climate change and urbanization. Manmade contributions to the climate change in urban areas have been altering the chemical composition of the atmosphere. This global problem, which has been recognized universally, causes the air quality corruption. Since the average temperature goes up in the world, it effects ice sheet melting, precipitation change, and sea level increases, all of which threatening to world-wide public health.

One of the most important reasons of the climate change is the increase in CO₂ levels due to emissions from fossil fuel burning and energy consumption because of daily human activities. The increase of energy consumption in residential areas displays the necessity of energy conservation. People who have an active

role in building projects, particularly architects and designers, are responsible for achieving this necessity. Efficient solution methods should be suggested with proper material and construction components. Also, energy efficient design will reduce and prevent excessive use of energy in our daily life.

This research tries to achieve the following goals such as to improve the total energy performance of residential areas, to maximize the presence of natural light in the space, to reach the optimum daylighting strategies, and to integrate them into all building control systems while maintaining visual comfort.



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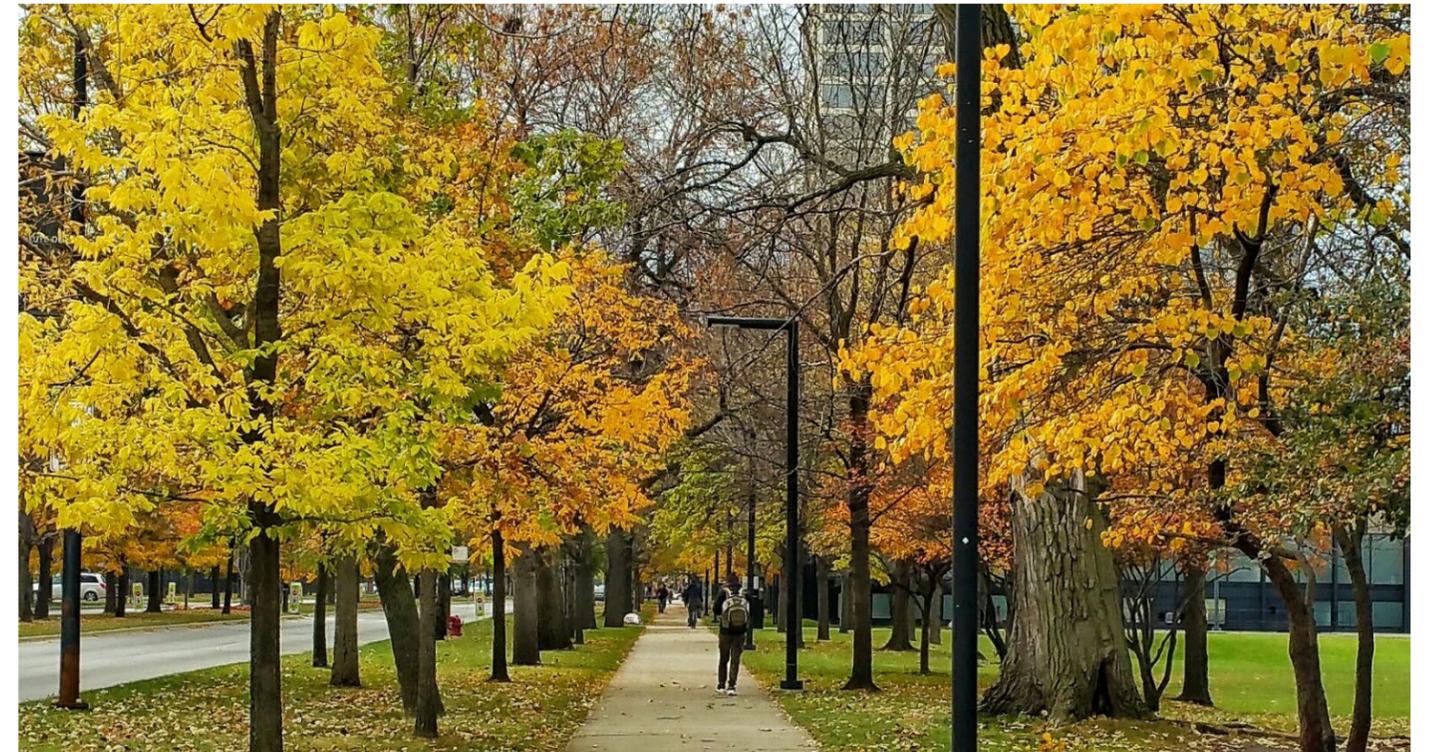
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RESEARCH INTERESTS:

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Photograph by Ahmed Hassan 2015

TRANSITIONAL CULTURED-NATURE

The Role of Biophilic Restorative Environments in Stress-Reduction Among College Students

College students are vulnerable to many stress-related stimuli during their higher education years. Stress levels among college students are serious: according to the American College Health Association (ACHA) - National College Health Assessment (NCHAII) (2014), the overall level of stress was rated as more than average by 43.2% of undergraduates and 47.4% of graduates, and it was rated as tremendous by 10.6% of undergraduates and 13.8% of graduates. This critical problem not only decreases students' academic performance (ACHA-NCHAII 2014), but also causes several health conditions due to stress association with serious symptoms ranging from emotional distress, muscular pain, stomach agony, and headache to the severity of suicide and violent behaviors (APA 2011). Considering the evidence-based physiological, psychological, and emotional benefits of humans' contact with nature and mediums of nature-simulation (e.g. Ulrich 1993–2008;

Loftness and Snyder 2008), biophilic restorative environments are desperately needed to mitigate students' stress and maintain their well-being. Academic campuses, by their natural, physical, and spatial qualities, may either provide these restorative opportunities or intensify students' stress. In view of the proven benefits of contact with nature as a restorative "positive distraction" (e.g. Ulrich 1991–2008) and the "social ecology of stress and restoration" (Harting and Kylin 2003; Harting, Bringslimark and Patil 2008), this research studies the potentials of transitional cultured-nature to function as an on-campus biophilic restorative environment by investigating its ability to reduce students' stress. In the context of academic campuses, mediums of transitional cultured-nature are not destinies by themselves; they are the intermediate outdoor spaces that emerge from both the fabric of the built environment and students' cycles of activities during their college life.



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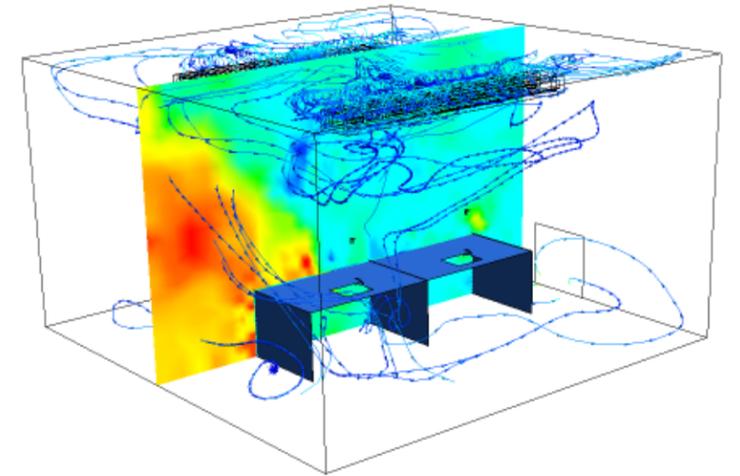
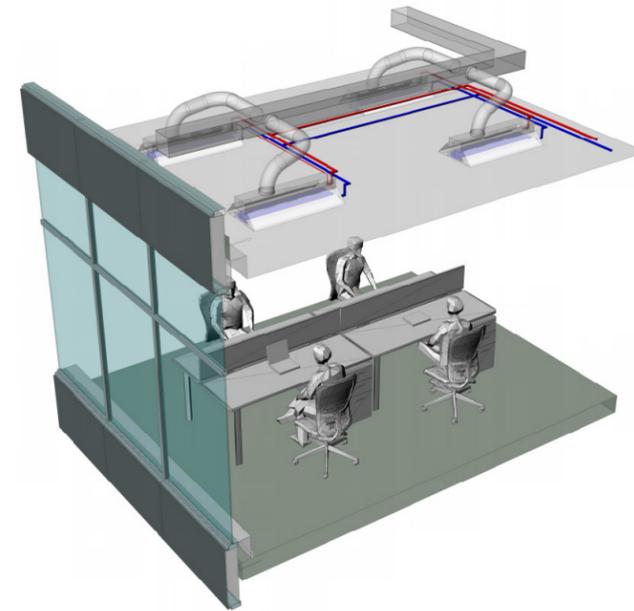
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INTEGRATION OF RADIANT COOLING SYSTEMS

with Natural Ventilation and Predominantly Glazed Façades in Office Buildings for Hot and Warm Climates (Case of Study of Mexico)

This study is limited to three cities in Mexico; the cities use the climate zones (1A,2B) that are representative of locations where more than 30% of the country's population. The studied cities are Monterrey, Torreon and Hermosillo. TMY3 files were used for each climate, which uses 8760 hourly weather data. The simulated prototype is an office building based on the manual for office spaces for the Mexican SAT (Revenue Office) as a benchmark of office buildings in Mexico.

The study analyses a conventional System 5a-VAV package with reheat as dened by ASHRAE 90.1(Appendix G, table G3.1.1B) against active chilled beams (ACB) and passive chilled beams (PCB) including a dedicated outdoor air system (DOAS). Each of these system is compared with the use of natural ventilation (NV).

PROBLEM STATEMENT

Is it possible to verify the feasibility and use of RCS in Office Buildings with predominantly glazed façades in Mexican hot climates? The main objective is to demonstrate the feasibility of RCS for office buildings in Mexico. The secondary objective is to show energy savings on RCS over conventional cooling systems. RCS should also comply with ASHRAE 62.1 and ASHRAE 55 standards similar to conventional systems, implementing dynamic thermal modelling tools applied to office buildings in Mexican climates. The last objective is to analyse the integration of natural ventilation with the use of RCS to increase the energy savings in office buildings in Mexican climates. With the use of energy modelling simulation tools and the verification from CFD analysis, accurate predictions can be achieved to solve these questions.



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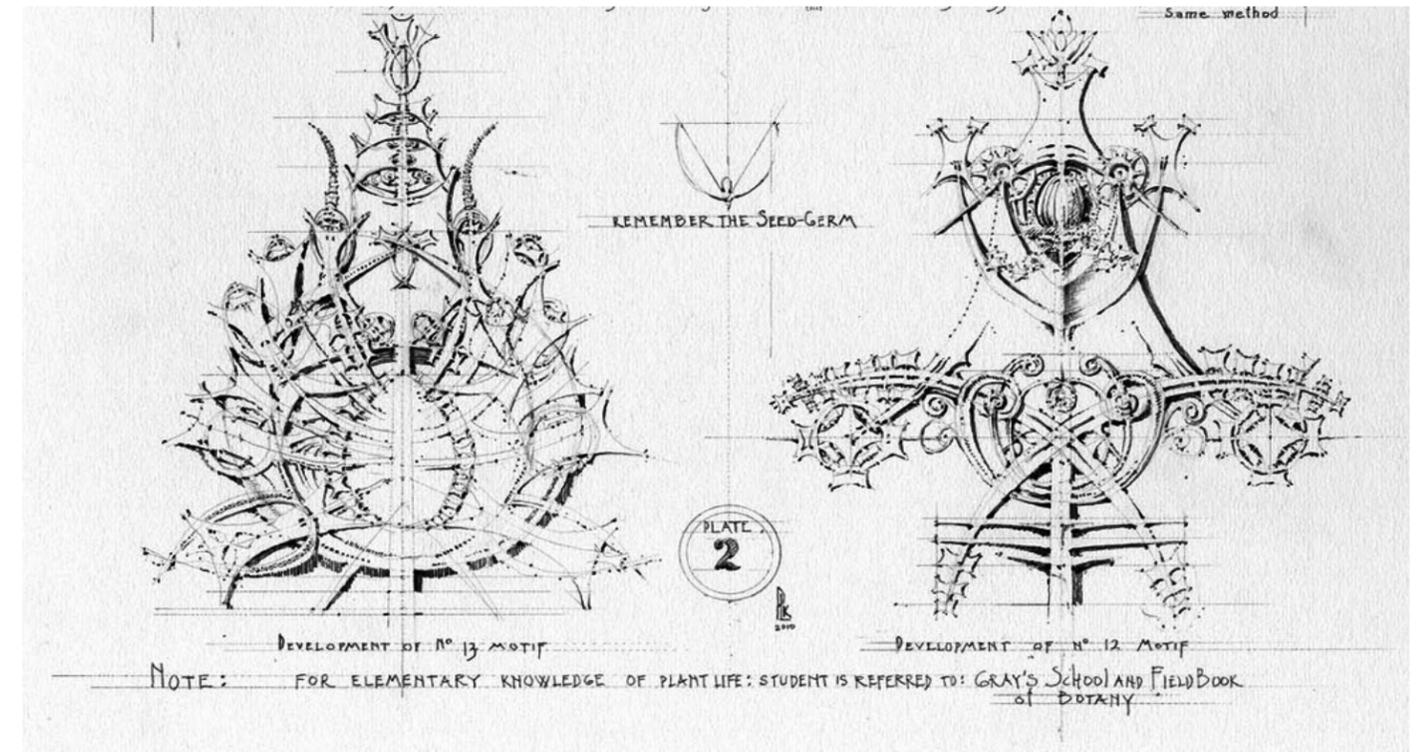
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DARWIN'S ARCHITECTS

How the Theory of Evolution Shaped the Chicago School of Architecture

The naming of epochs has been one of the primary functions by which scholars have made broad distinctions among modes of experience at least since the beginning of the era that we collectively identify as modernity. What is perhaps most interesting about our definitions of epochs is not merely that we all agree to act as if they exist, but that, once established, they are largely taken for granted as part of the broad intellectual lingua franca. One can talk about modernity in art and architecture and assume that, even if they aren't entirely the same, they have much in common with the project of the modern nation state, or the reality of modern appliances, or "Modern Love" (both the subject, and the David Bowie song of the same name).

This is a book about the last time we were certain about an epochal change occurring. Depending on what you believe, It may be the beginning of our current epic, or the beginning of the one before. We largely agree that, thanks largely to the doctrine of Pax Britannia, large parts of the rest of the world, the Victorian era did

occur, and it is most certainly over at some point in the early 20th century. We also largely agree that something called the modern era followed it. Still, we disagree as to whether or not that has been replaced by the Information Age, or one of a variety of other names, like globalization, that still have some currency in contemporary discourses.

This particular semantic distinction, however, is of central importance for what we see as the direction of our collective experiences both then and now, and equally for our aspirations for them in the future. In the practice of architecture, it has been there has been consensus since the middle of the 20th century that architecture reflects the spirit of an age, and may be a signpost on the way to the world changing. Whether that belief is merely a posture endemic to the modern era or it is a facet of architecture that we discovered during that period is a vital question.



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THE EXPERIENTIAL EDUCATION

The Study of the Students' Learning Outcomes through 2015 IIT Design/Build Project

Design-build courses can create powerful learning experiences for students. This research tries to figure out design-build learning outcomes through the author's observation and the students' interviews about a design-build project conducted in Illinois Institute of Technology's architecture program. Key learning outcomes included: gaining construction knowledge, skills, and values; integrating design with construction; engaging with "real world" problems; developing personal qualities and interests; improving their transition from school to work; Learning and considering others; and sensing architects' social responsibility.

Learning outcomes may be closely linked to the hands-on, holistic, "real world," and collaborative qualities of design-build courses. Additionally, in this particular case, the experiences of anticipation, working together and seeing tangible results appeared significant to the students' experience. Viewing design-build from per-

spective of students creates a compelling argument for how valuable and rewarding design-build education can be. Students experience a wide variety of learning outcomes, and the emotional investment of the students had a large influence on their experiences.



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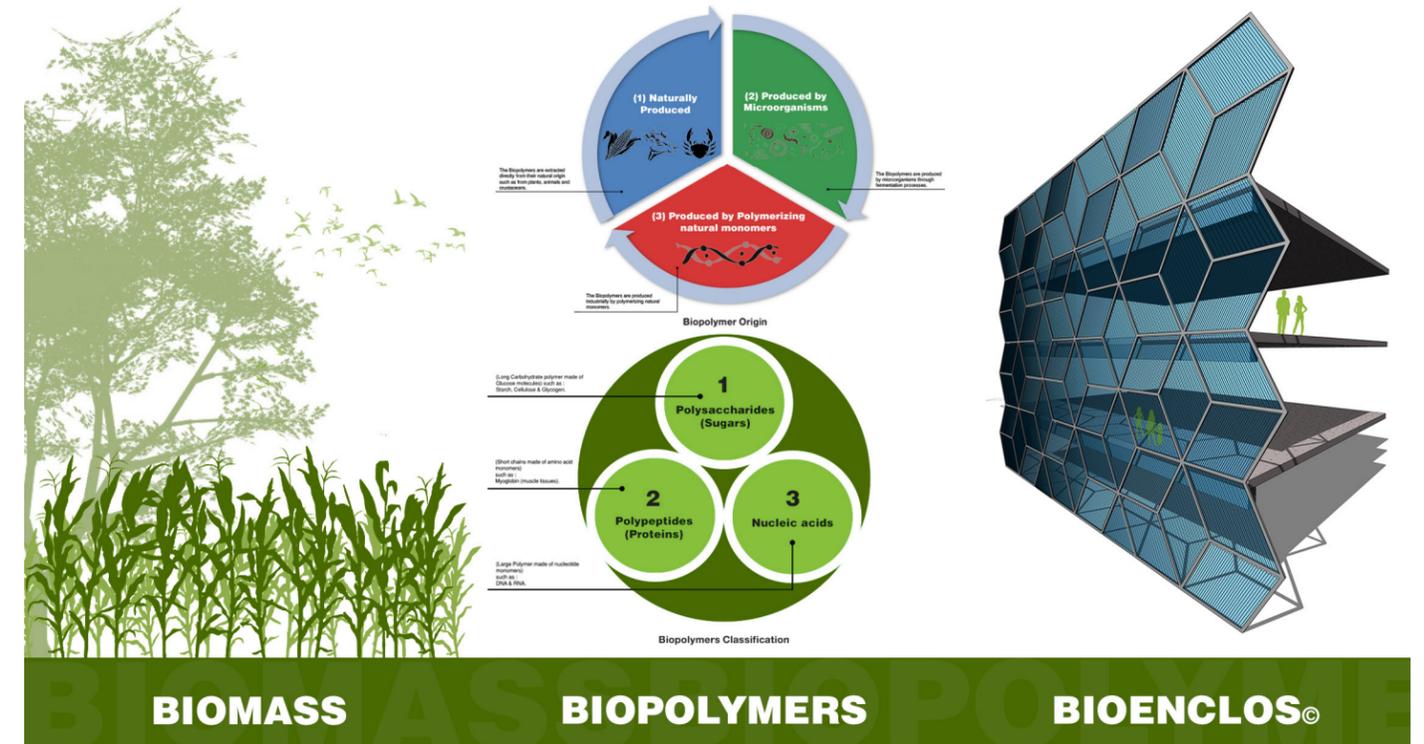
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THE BIOENCLOS© FAÇADE PANEL

From selection to design, assessment and beyond.

In the recent years, Biopolymeric materials derived from renewable resources have successfully replaced the petroleum-based plastics in many applications. They currently cover (10-15%) of the global plastic market and are expected to grow by (10%) annually to reach (6 million tons) by the year 2016. The Building industry is one of the potential fields for Bioplastics and Biocomposites to conquer with a special aim to replace some of the conventional materials used particularly in the building Facades. Unlike the conventional façade materials, Biopolymeric materials can lessen the carbon footprint of the building façade significantly and contribute in alleviating the amount of construction and demolition waste dumped in the landfills each year by providing more sustainable end of life options. This will help in saving natural resources, conserving landfill spaces, preventing pollution and reducing the overall building weight and energy consumption. The intention of this

research is to develop a resource efficient alternative façade assembly made of Biobased materials, derived from agricultural by-products, and assess its' impact on the Environment and the building overall energy performance, thermal behavior and structural stability. To do that, this research aims at developing a well-defined framework that adopts rigorous selection criteria to facilitate proposing innovative materials, to the BioEnclos© facade panel, capable of handling all the environmental, economic and functional considerations of the building facades. Secondly, Carrying out some specialized simulation tests to ensure that the new proposed building façade panel satisfies all the code requirements and outperforms the conventional office building facade materials in terms of moisture control, heat transfer, energy conservation and structural performance.



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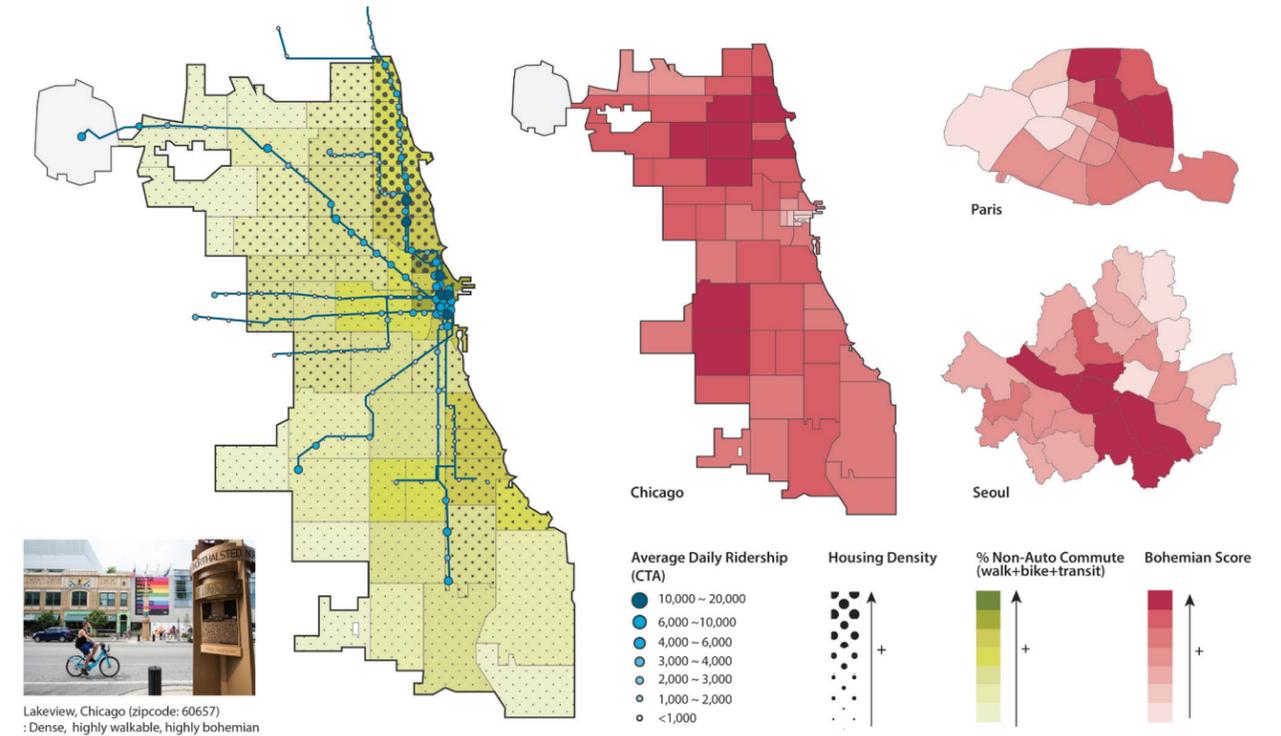
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WALKABLE CITIES

Comparative Study: The impact of socio-urban and cultural context on walking, bicycling, and transit use in Chicago (U.S), Paris (France), and Seoul (Korea)

In last decades, followers of Jane Jacobs have sought to codify her ideas about 'eyes on the street' enhanced by density and diversity of mixed-use neighborhoods, illustrated in her examples of Greenwich Village. Core hypothesis of this research emphasizes mixed-use, density and cultural diversity as encouraging urban development and neighborhood vitality mainly based on Jacobs' argument, and connects it with walking, bicycling, and public transit. This comparative analysis of U.S, Korea, and France adds more details on walking, bicycling, and public transportation use, as well as their contexts where these shift in three countries and their metropolitan areas. While past academic researches based on the idea of New Urbanism and Transit-Oriented Development, following Jacobs' theory have already shown that density is a key factor of commuting choice and walkability, cultural implications of neighborhoods and cities have been largely ignored.

Rethinking Bohemia in the 21st century, many studies in urban sociology including Creative Class (2002) by Florida, neo-bohemia in the case study of Chicago's Wicker Park (2010) by Lloyd, and Scenes (2015) by Clark et al have argued that contemporary Bohemian culture has strong relation with a large spectrum of urban economy associated with art, music, and creative activity, as originally shown in Baudelaire's life in Latin Quarter, Paris. Therefore, this empirical research brings cultural concept of Bohemia in analysis of walkability through the use of public transit, walking, and bicycling. Bohemia is codified and numerically measured to test its impact on commuting choice and transit ridership across three countries of U.S, France, and Korea, and their metropolitan areas of Chicago, Paris, and Seoul. New finding from this statistical analysis showed that Bohemia in U.S has significantly positive correlation with bicycle use.



KRISTIN JONES

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RESEARCH INTERESTS:

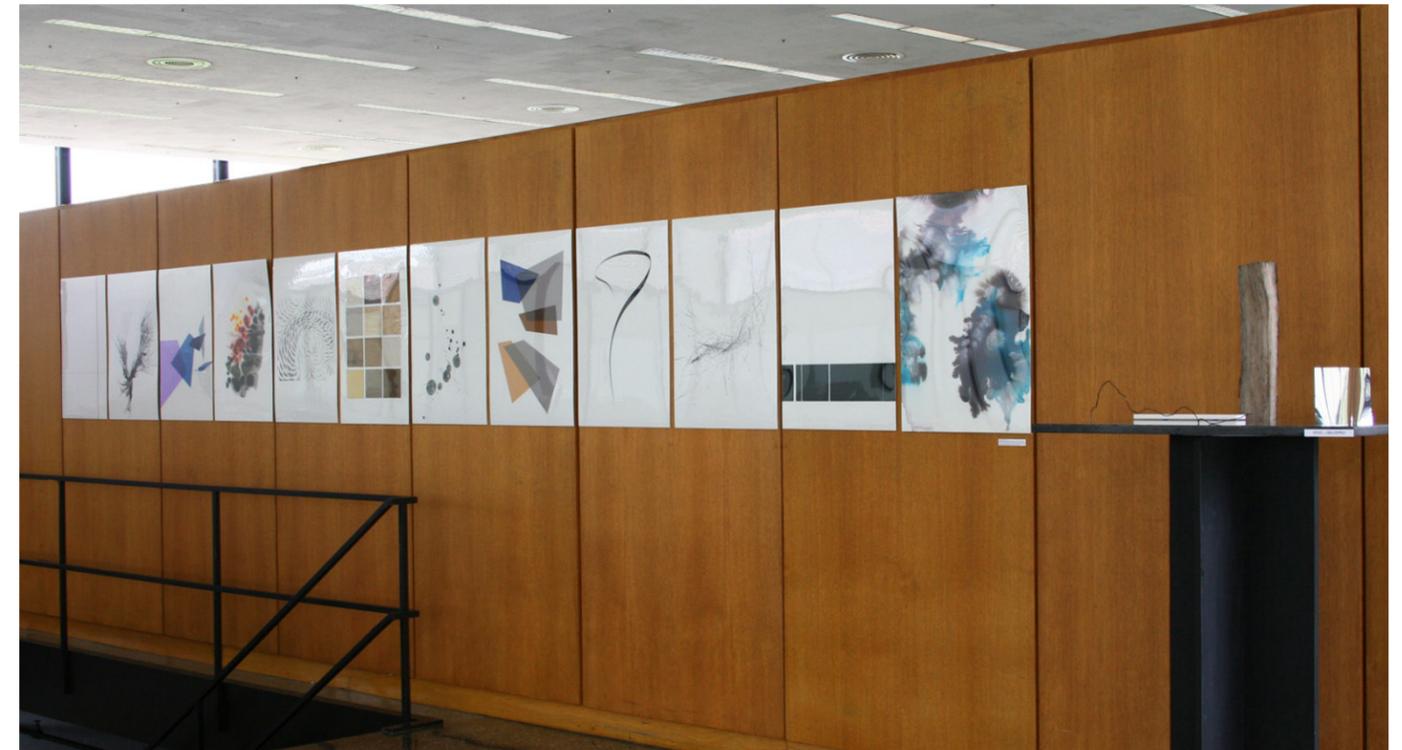
Architectural Education, Visual Training, Aesthetics, Pedagogy

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VISUAL TRAINING AT IIT

Dealing with Problems of Aesthetics in Architectural Education

Visual Training is a course that deals with form and cultivates aesthetic judgment. Currently, Visual Training is offered as elective coursework. But for 58 years, it was an integral part of the school of architecture at Illinois Institute of Technology founded by Mies van der Rohe, required alongside planning and construction in the core curriculum.

This dissertation explores the pedagogy of Visual Training. *Chapter 1: Introduction* introduces the research topic as a question of what Visual Training is and how it works, further defined as the role of Visual Training in the curriculum, the justification of that role, and the way in which this pedagogical theory is implemented through the exercises. *Chapter 2: Background* provides a summary of archival materials and published research on Visual Training as well as an overview of the course background including the role

of Visual Training within the IIT curriculum and its philosophical foundations and lineage. *Chapter 3: Pedagogical Analysis* describes each exercise and how the eye is not only opened to the possibilities for form and attuned to quality craftsmanship, but also distinctively trained to discover aesthetic expression within the problem itself. *Chapter 4: Comparative Analysis* compares the Visual Training exercises with IIT's drawing exercises and space problems as well as exercises from the Bauhaus *Vorkurs* in order to further clarify the distinctions in aims, approaches and roles. *Chapter 5: Findings* identifies the key points of Visual Training including the appearance and significance of aesthetic expression and the methodology of the course. *Chapter 6: Conclusion* summarizes the accomplishments and limitations of the dissertation and points to future studies and recommendations.



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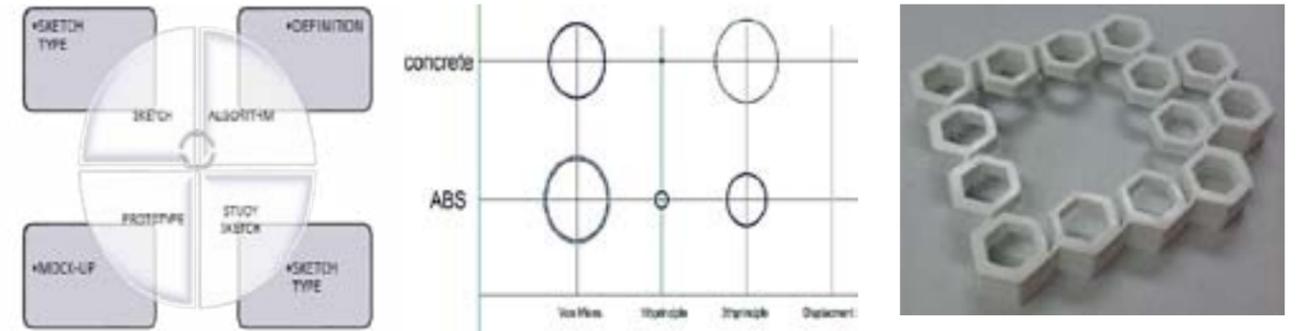
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3D PRINTED MASONRY UNIT

A New Interlocking Carbon Neutral Wall System in ABS Plastic

This study investigates the design and prototyping of a new unit masonry. Through experiments using the advantages of 3d printing method, it seeks to improve the structural efficiency, provide the choice of a higher quality material and increase weatherability and insulation performance in current masonry construction. These advantages will also result in a new tectonics in which handling, assembly and modularity are combined as a result of new constructability solutions. The method uses a base wall system in an existing residential case study in Chicago; to compare to the proposed system based on a set of specific architectural and construction problems in masonry technology. This base model uses the climatic data and the code requirements of its location for analytical studies. The proposed 3D printed block solves the prevalent masonry construction problems and the building code issues. This research is conducted in four independent areas: Structural efficiency, ease of assembly, weatherability and thermal character-

istics. After studying the 3d printed masonry unit individually for each aspect through a series of design/build prototypes, the designed model is simulated and compared to the base model for a residential case study which will result in a built 4'x4' wall section. Improvements in the above area will be compared to that of the original case study in a table. Ultimately, the outcome of this research is a design guide manual that includes the different features of the new masonry unit and is based on the analytical studies and the resulting preferences.



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THE FORGOTTEN CHAPTER OF THE BAUHAUS

Psychophysiological aesthetics and the inception of modern design theory

As a much-contested account of modernism, the story of the Bauhaus has been rewritten in many ways. While the dominant narrative considered the school as a forceful, autonomous entity that stood triumphant in its supposed denial of history and an innovation in modern pedagogy, studies that challenge this autonomy have been exclusive to social and political precedents in the Wilhelmine era. Yet, there remains a significant need in scholarship to fully grasp the scope of the Bauhaus as an aesthetic paradigm that goes beyond an elusive devotion to modern aesthetic ideals. This dissertation aims to position the Bauhaus as the outcome of a broader epistemological framework of its immediate past. Looking through four discursive lenses that pervaded modern design theory, the aim is to unveil the significant contribution of a forgotten chapter in their inception: the interaction of human sciences with aesthetics at the turn of the century. The resulting connection between pre-

and post-World War realms is in their scientific footing that sought to eliminate contradictions between aesthetic vitality, the artist, and conditions of real-life. Seen in this light, the era of 1895-1914 shaped modern architectural theory more vigorously than previously realized. Today, we have every reason to study such a transition, not only to excavate nuances that challenge the canon but also to advance current studies on the historiography of the Bauhaus. Despite the new insights they offer into the conflicts within the school as well as its postwar influence, scholars still consider the historical positioning of its artistic philosophy in fragmentary episodes. I hope to contribute to this body of research by investigating how the Bauhaus came to express the aesthetic disposition of a past milieu it claimed to negate.



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COMFORT IN TROPICAL HIGHLAND CLIMATES

Improvement of housing quality through courtyards in Bogota-Colombia

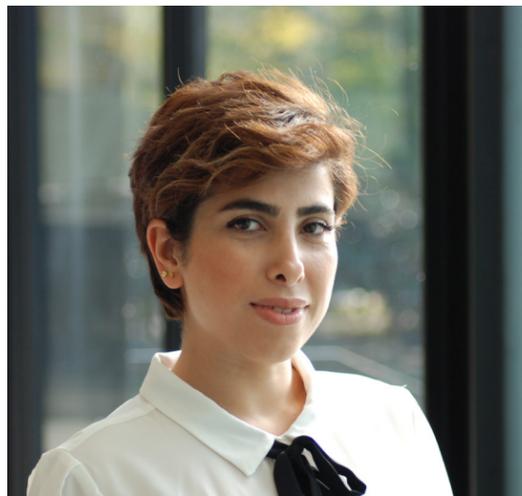
This dissertation studies courtyard buildings in Bogotá, Colombia. As deficit in the quality of new social housing test current solutions, residential typologies based on courtyards can be thought as solution for improving indoor environmental standards.

In Bogota, due to the absence of regulations, poor indoor conditions of thermal comfort are commonly tolerated. Therefore, housing units are characterized by insufficient living and open areas, with no possibilities of expansion for users who suffer of overcrowding and cohabitation.

Courtyard residential buildings are studied in the context of a temperate climate like Bogota (4° Lat. North 2600 m a.s.l.- 8530 ft a.s.l.), where daily ranges are more significant than seasonal ranges: the daily variation in temperature can range from 68° F (20°

C) during the day to 37° F (3° C) at night. If typologies based on courtyards for new social housing in Bogota are implemented, then better indoor environmental quality and higher occupant satisfaction will be achieved.

Without previous studies related to thermal comfort in residential spaces in Bogota, this research explores the performance of a typical housing social units through data logger measurements and surveys. Based on this experiment, physical and digital modeling area carried to imagine sustainable developments based on courtyards that can guarantee appropriate indoor conditions and meets the demand of urban growth and energy resources.



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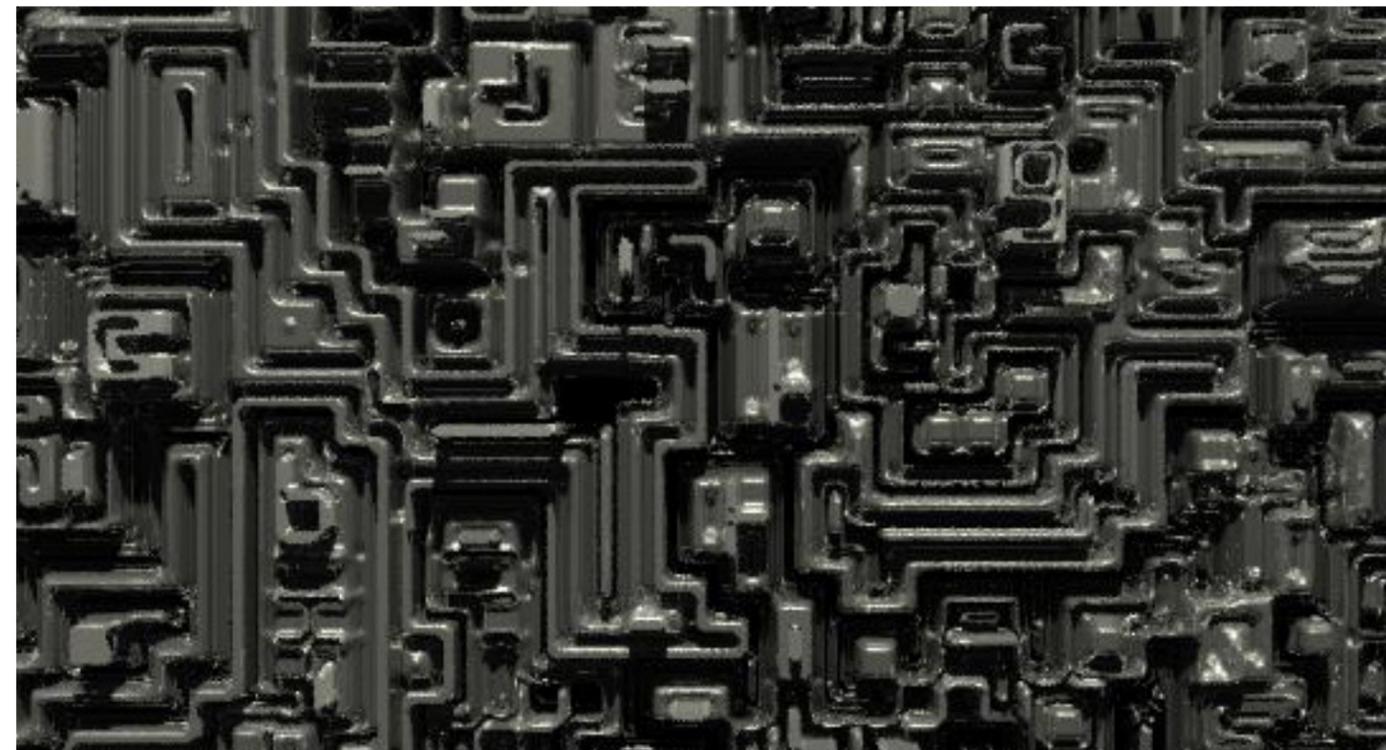
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CONNECTED CITIES

A Critical Approach Towards Rapidly Growing Condition of Implementing Technologies in Everyday Life

Half a century or more ago, cities were assumed as systems in equilibrium for the first time. These entities were defined as benign closed systems (distinct from their environments) of interacting elements which were organized with a grand design. This definition that a city is a passive system completely ignores the fact that cities change all the time. In fact, they are more like a biological system (organism) than a mechanical one (machine) and they grow or decline with evolutionary processes than a deterministic design. This new definition of complexity explains cities as open systems and as the production of millions of people's decisions and activities.

The new paradigm of complex system has changed the understanding of cities dramatically. At the same time, as information and communication technology embedded in physical infrastructures such as sidewalks, streets and public spaces of the city, we in-

creasingly find information throughout the fabrics of everyday life. These evolving conditions alter traditional designs and methods of architecture and urban planning. Cities are places where people come together to interact and exchange commodities and information with one another and in order to have a better understanding of cities we must study networks, interactions, connections, and other ways in which people communicate with each other.

This research tries to demonstrate a critical approach towards this rapidly growing condition of implementing technologies in everyday life (smart cities) and explains what this condition suggests for architectural and urban design strategy in this digital age. It examines the active role of people as designers, inhabitants and participants in this complex and unpredictable near future urban environment.



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RE-VISITING THE TRA- DITIONAL SAUDI HOUSE

A New Approach Towards Social and Cultural Sustainability in the Designs of Contemporary Living

Throughout various historic periods of the Middle East, the construction of the built environment has been a result of progression in sociocultural values, religious context, political framework, science and technology, and the progress of society as a whole. In developing countries, like Saudi Arabia, which have been experiencing a rapid rate of urbanization, sustainable concept intervention is essential due to the scarcity of resources. On questions of Saudi identity in the development of housing design, in many cases, this process has meant the inclusion of “foreign elements”; these elements are layered onto the architectural object. The gridiron street pattern and the detached villa-type dwelling unit were introduced into Saudi Arabia, representing the contemporary style of houses and neighborhood design. This new foreign style was originally developed and applied for countries other than Saudi Arabia and which has different climates and social

needs. The prevailing attitudes toward contemporary dwelling has not developed naturally from the traditional concept of conventional Saudi houses, nor has it developed or improved over a long period of time in accordance with regional, social, and cultural needs, which led to absence of social and cultural sustainability implementation in the design of contemporary Saudi houses. In fact, social and cultural sustainability is perhaps the least explored within the mainstream development literature (Galal, K., 2011). In order to protect and improve the quality of living, which lies at the heart of the interaction between the environment, economy, society and culture, this research seeks to re-think the design concept of the traditional Saudi house and highlight its distinctive characteristics and principles as a new approach towards social and cultural sustainability in the designs of contemporary living.



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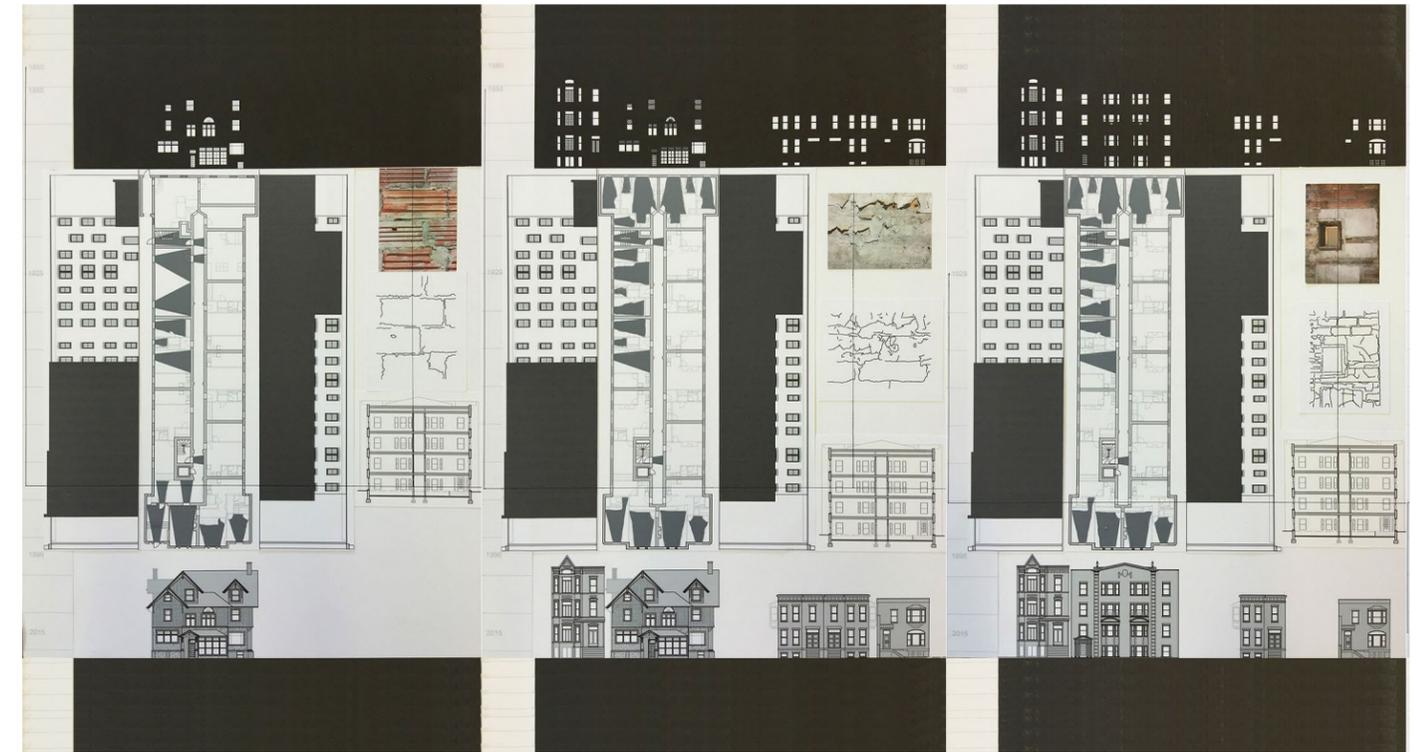
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ARTISTIC PROPRIETY AND EXCLUSION

The Insatiable Allure of the Rarified Anti-Contextual Object, A Society Star-Architect and the Future Development of the Private Museum in Lincoln Park, Chicago

Totemic objects provide tangible evidence marking the epitome of what was valued and celebrated in past civilizations. Contemporary repositories of collections of these fragments attempt to re-tell forgotten stories and occasionally address suppressed narratives for the edification of the visiting voyeur. The traditional rôle of the institution of the public museum has been put into question as new private gallery spaces have entered the res publica and displaced orthodox methodologies concerning educational control over the dissemination of history, long-held by the establishment as sacrosanct. The dissolution of clearly defined boundaries between nations and colonial-era ownership claims by states versus museums blur the intentionality of assertion of expertise- and thus control- over objects bearing representations of knowledge of the past. This obfuscation of realities of contemporary provenance and possession has resulted in conflicts

concerning explorative versus exploitative procurement of historic artifacts, removed from one public domain for alternative examination in another, typically more economically resourceful and lucrative private dominion. This thesis explores the broad range of issues the private gallery is subjected to when entering into the foray of the public domain. Specifically, the pragmatic, programmatic and tactical issues are explored for the purposes of creating a theoretical framework for the emergence of a new institution containing artifacts from displaced civilizations with ceremonial practices no longer prolific in original situ. How shall a new era of propriety reign in a transitional space traditionally held to be anathematic to the passage of time? What relevance does a private repository of antiquities have upon the enlightenment of a population far derived, and some would argue, far divorced from entrenched nationalism embodied in today's pluralistic society?



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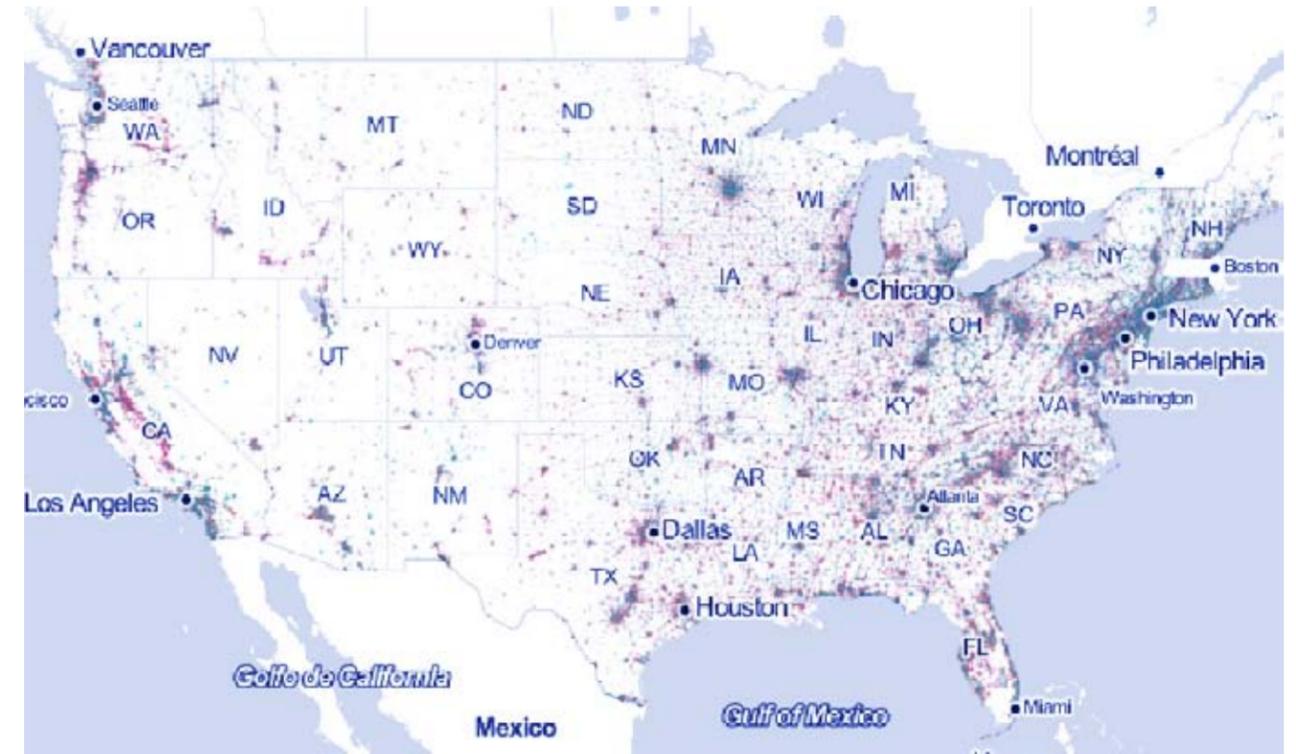
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ENHANCING URBAN SOCIOECONOMICS'

Looking beyond Conventional Mixed-use Development Model

Mixed-use development has taken center stage in the Metropolis and current urban planning development. It is frequently cited as a development type that can address a variety of social problems and has enjoyed a recent surge in popularity in redeveloping cities by providing more affordable housing opportunities and choices, provide security, reducing auto dependency, and a longing for the sense of place and community. However, its physical design and affordability outcomes are highly variable. We are particularly interested in whether and how mixed used impact on the neighborhood socioeconomics configuration of the built environment; in terms of distribution of wealth, opportunities, and privileges within a society.

Using multi-level data from zip code level to county level representing all US with contrasting implementation methods of mixed-use development

and different cultural and historical backgrounds, this research proposes a novel graph-analysis framework in which mixed used patterns can be represented under realistic constraints of urban geometry, socioeconomic structure, land use distribution, and accessibility.

It presents different interactions methodology from spatial socioeconomic metrics to urban form and apply it to a set of constraints on social and economic configuration like race, income, accessibility, safety, accessibility and density, I believe that the findings will inform policy makers, economists and planners about factors that sustain mixed used in cities communities. Urban designers will apply more delicated planning ideas tailored to socioeconomic of cities, in a contrast of generic abstract theories or slogans.