UIA 2017
SEOUL WORLD ARCHITECTS CONGRESS

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UIA 2017 SEOUL BOOK OF ABSTRACTS AND ACADEMIC PAPER SESSION PROGRAMME

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DECLARATION
All the abstracts in this book were double-blind, reviewed by the UIA 2017 Seoul Reviewers. This process entailed detailed reading of the abstracts, reporting of comments to authors, modification of abstracts by the authors, editing by the UIA 2017 Seoul Editors as well as the UIA 2017 Seoul Programme Partners. In some cases, the authors of submitted abstracts were further invited to submit full papers for consideration for the UIA 2017 Seoul Proceedings Book. It is only the full papers in the UIA 2017 Seoul Proceedings Book that have successfully been accepted through the reviewed process. The abstract book is therefore a compilation of abstracts submitted that were deemed worthy of acknowledgement and presentation at the event.
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Welcome Message

from the Presidents of the Congress

Dear Architects and scholars,

UIA 2017 World Architects Congress is opening in the city of Seoul that prides in 2,000 years of culture and history. On September 3, we will witness the culmination of the sweat and toil that the Organizing Committee invested for the past 6 years, as we kick off the official schedule of the 5-day event.

We would like to thank all those who served on the Committee to prepare for this event, and we would like to express profound appreciation to UIA members in each country, who played their part to bring architects and scholars from around the world to this Congress.

Under the theme of ‘Soul of City’, we have worked hard to create an opportunity to renew our understanding about the role of architecture that not only helps to instill vitality into a city, but also guides the future, where sustainable development is achieved in conjunction with modern technology.

The Seoul Congress provides a variety of programs that will bring together scholars and designers from the East and West through their lecture and forums; in addition, UIA seminars, special sessions and Architects Lecture Series will introduce a wide variety of topics. Through these programs, urban and environment-related issues that are being experienced around the world, will be identified, discussed, and potential solutions will be recommended.

Paper and design works display and presentation will mark another achievement for the future of UIA and world environment where all those serious efforts are much needed.

Leaders of the world’s architectural community!

This event is sure to be a global festival where students, professionals and young generations will come together and to discuss culture, environment, and to share their perceptions and ideals of beauty. While it may be short in duration, we hope you will take active part and create an experience that will be cherished for

As we speak, many parts of the world suffer from incessant destruction and disputes. we hope that this Congress will serve to bring the world closer together through the medium of architecture and culture. Let us all exert efforts to pursue respect for our delicate environment and a peaceful world, where we can take collective steps toward peaceful and harmonious coexistence.

To my colleagues in Architecture and to all participants,

This is our sincere hope that you enjoy being in Seoul, Korea and back to your home with pleasant memory of UIA2017 SEOUL.

Thank you

HAHN, Jong Ruhl
President of the Congress
UIA2017 Seoul Organizing Committee

SEOK, Jeong Hoon
President of the Congress
UIA2017 Seoul Organizing Committee
Greeting from the Scientific Committee

Nowadays professional architects are busy to adjust their realm of imagination to the speedy and diverse alteration of the real world. Academic and scientific efforts are also in astray with ever-changing ideologies and values of the human communities. Machine became even closer friend of men, and Nature claims for her due share of sympathy. On the other hand, human societies suffer by increasing separatism and materialism. Still man looks for survival kits of delight, passion, and humanities.

Architecture is to provide fun and vitality to city life. Our task becomes even more essential. The UIA 2017 Seoul Congress is looking for a momentum of revival for architectural ways of vivid city making. World architects would argue and claim for FUTURE, complain about the PAST, and find orientations in TODAY’s architecture. We like to expand Togetherness, Equality, and Friendship for the vitality of city lives.

Fifty invited speakers will talk about their ideals and more than 800 architectural and academic treatises are presented for the Congress of the World Architect Organization. Upon the theme of SOUL OF CITY, delegates will discuss various ideas for the human centered city lives. This endeavor will provide an occasion for all of us to rebuild our energy toward equal, noble, righteous, and jewel like humane city and urban lives thus resembling the First Creation.

For the Scientific Committee, more than 30 intra and international professional and academic personnel have given their best preparation efforts for the Congress program through past years and a great applaud is to be given to them. In addition, supporting professionals’ “dew-like” sacrifices and diligence made this World Congress comprehensible to all the talented participants. Based on our Unity and Understanding, we believe human well-being would become more apprehensible by way of Architecture.

LEE, Jungman
Chair, Scientific Committee
UIA2017 Seoul Organizing Committee
# Scientific Committee

## UIA 2017 Seoul Scientific Committee

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First of all, I would like to extend a warm welcome to all of the representatives of the 124 member countries of the UIA and all of the participants of the UIA 2017 Seoul World Architects Congress. It is truly an honor for Seoul to host this meaningful congress, and it is a special privilege for me to deliver the first keynote speech.

The overall theme of this year’s congress is the Soul of the City, and over the next three days, lectures will be held on three sub-themes: Culture, Nature, and Future.

I believe that the City of Seoul is the best city to show you the soul of the city. Seoul and soul sound so similar!

The City of Seoul is a city with soul. But where does this soul come from? I always say that the soul of Seoul is its three landmarks. First, its rich history and culture, which can be traced back to more than 600 years. Second, its beautiful natural environment, which boasts magnificent rivers and mountains. And third, its 10 million citizens, who are very smart and multi-talented. These three elements are the real soul within the dynamic Seoul.

Seoul is currently undergoing a period of reflection and transition. The past industrialization period was all about demolition and reconstruction and redevelopment. Nowadays, however, the focus has shifted to history and culture and nature and, most importantly, people. Seoul is striving to become a more people-oriented city.

A good example is the Seoullo, which used to be an overpass but was converted into a pedestrian walkway and was officially opened to the public last May. This project shows Seoul’s commitment to move from a car-centered city and to a more pedestrian-centered city. The Sewoon Shopping Mall, a mega-structure built in 1970, will also be transformed soon.

Also, the Mapo Oil Reserve Base, which was created in the 1970s, will be renewed and reopened as the Culture Reserve Base, a hub for culture, history, nature, and leisure. From September 1, 2017, the Seoul Architecture Festival 2017 will be held at the Culture Reserve Base, and exhibitions of the winners of the Seoul Architecture Award and the This Year’s Architect Award will be held as well, so please spare some time to visit.

The Donuimun Museum Village, where the Seoul Biennale of Architecture and Urbanism 2017 will be held, is another example of Seoul’s efforts, so please visit and experience.

Cities are great platforms for sharing. Public spaces throughout cities should, first and foremost, serve public interests. Unfortunately, however, this “publicness” has been greatly undermined over the years due to rapid industrialization. And this has a correlation with the loss of a sense of community and humanity.

The Seoul Metropolitan Government is carrying out several public architecture projects to restore the “publicness” of public spaces in the city. In other words, we are pursuing democracy in public spaces.
For example, we are renovating community service centers, neighborhood libraries, and daycare centers, which can be of direct help to the livelihood of the citizens.

The people that are playing key roles in these projects are the Seoul Architects and the City Architect of Seoul. We have appointed 150 Seoul Architects, and their responsibilities include giving advice on various projects, from small architectural structures to large infrastructure. The goal is to highlight the social responsibility of architects and to involve them in the process of resolving urban challenges. I am very thankful for our Seoul Architects and the City Architect of Seoul.

I am certain that all of the participating architects here today are also playing similar significant roles in their own countries, to which I express my deep respect.

Another social responsibility that architects have is to help strengthen the citizens’ sense of ownership and rights over public spaces throughout the city. I hope that this congress can serve as a platform on which architects can engage in communication with the citizens and help strengthen their sense of ownership and rights over public spaces.

I also hope that many issues related to urban architecture can be discussed and effective solutions can be found as well so that we can resolve the common urban challenges that cities around the world face together and set forth the future direction in which cities should take.

Thank you very much.

KS01-2
Monday 4th September 2017 / Hall D (3F)
14:00-15:00

Three

TSIEN, Billie; WILLIAMS, Tod

Architect, TWBTA, United States

We will explore three cities through the lens of several projects completed between 2001 and 2015. Starting in New York, where we have lived and practiced for over forty years, we will share our insight for the American Folk Art Museum, located in midtown Manhattan, as well as the LeFrak Center for recreation in Brooklyn’s Prospect Park. In Philadelphia, we designed the Barnes Foundation, the first building completed along the Benjamin Franklin Parkway since 1959. Further away in Hong Kong, we completed the Asia Society on a uniquely verdant and historic site in Admiralty. Each location offered a particular character, context and challenge that required a specific response - we always want our buildings to be good neighbors.

KS01-3
Monday 4th September 2017 / Hall D (3F)
18:00-19:00 (Open to Public)

The Legacy of ZAHA HADID – Retrospective and Prospective

SCHUMACHER, Patrik

Principal at Zaha Hadid Architects (ZHA), United Kingdom

“There should be no end to experimentation.”

Zaha Hadid

Zaha Hadid insisted that we expand the boundaries of our discipline, our understanding, and our knowledge while at the same time cultivating humanism.
Zaha Hadid Architects transform notions of what can be achieved in concrete, steel, and glass; combining an unwavering optimism for the future and belief in the power of invention with concepts of urban and social connectivity. Our mission is to create projects that stand as symbols of social progress and culture. We are beginning to succeed in this mission as evidenced by the awards and honours ZHA received from civic and professional institutions across the globe.

Our primary focus is on contributing to human well-being and to a vibrant civic life as one of our well-being's crucial ingredients. For us appeal and the sense of beauty in architecture is nothing but the intuitive recognition of a life-enhancing place and built environment that delivers the well-being we all seek. Social functionality is our starting point and key driver of all our design ambitions and decisions. Once a so motivated design concept is established, we look careful at all the technical requirements that need to be met and all the efficiencies that can be garnered on the basis of the most advanced methodologies and technologies. ZHA applies state of the art innovations in design, material and construction technologies. The development of 3D Building Information Modeling (BIM) in the design, construction and operations of ZHA's buildings dramatically increases construction certainty and efficiency and reduced the energy consumption and emissions of many of our projects by up to 50%. ZHA is delivering innovative solutions to the defining challenges of our era. Collaborating with visionary clients and industry experts on more than 50 award-winning projects in 45 countries, ZHA's hugely talented and dedicated teams of experienced professionals honour Zaha Hadid's legacy; working with passion and commitment to design and deliver transformational projects on six continents.

The lecture gives an overview and cross section of the recent and current work of Zaha Hadid Architects including built and un-built architectural works, furniture and product design, as well as the experimental designs of our internal research group CODE (Computational Design). The lecture intends to deliver a panorama but also offer penetrating insights into individual projects and their design rationales. The spectrum of designs shown displays a wide diversity of spatial morphologies reflecting the various scales, places and purposes our designs cater for. The diversity of forms coming from a single source might be surprising. We are inspired by the endless forms of nature and we would like to flatter ourselves that our expanding design repertoire receives its appeal due to its nature-like feel. This nature-likeness is due to our design methodology and very general design values privileging adaptive malleability over platonics purity in the elements of our compositions, dynamic differentiation over static repetition in the way we create systems out of our elements, and adaptive resonance over mere juxtaposition when we layer multiple subsystems into a complex urban texture.

These three preferences constitute the three core values and heuristic principles of the style we subscribe to: Parametricism. These rather general and abstract principles - adaptation, differentiation, correlation - leave an infinite scope for creative instantiation and are thus compatible with continuous innovation and surprise. Nevertheless, these principles do not allow for arbitrary formal play and also exclude all prior styles of architecture. The principles of adaptation, differentiation, and correlation help us to translate performance parameters into optimized morphologies. As in nature, our forms are not invented forms, but emerge within a morphogenetic (design) process that feeds an initially intuitively selected spatio-formal system into a quasi-evolutionary optimisation process. We believe this way of designing our urban environments is most congenial to the opportunities and challenges of our computationally empowered information society where the diversity, complexity and dynamism of our social communication processes suggests that we draw together ever more closely into densely layered urban hubs where synergies can flow and criss-cross elegantly and productively.

Although the work of Zaha Hadid turned out to be so different from most other work that it became conspicuous, memorable and soon readily identifiable as bearing her unmistakeable signature, architecture was never a medium of personal expression for her. Therefore, to interpret this work as striving for personal expression is to misunderstand it. This misunderstanding is sometimes linked to the dismissal of this work as only relevant at exceptional occasions. In contrast, in Zaha Hadid's own mind, her original architectural language aspired to general relevance. She saw this as a generalizable innovation that should contribute to society's progress and ultimate to our individual and collective wellbeing.

Zaha Hadid always believed in progress and in creativity's role in progress. This was what she experienced in Iraq through her father's role in Iraq's political, economic and social progress in the 1950s. Modern architecture played an important role, also in Iraq, with contributions of Frank Lloyd Wright, Le Corbusier, Gio Ponti, Josep Lluís Sert, Doxiades and Walter Gropius' TAC among others.
When Zaha Hadid arrived at the AA in the early 1970s there was a lot of exciting debate and confusion about architecture’s role and future. When she joined Elia Zhengelis and Rem Koolhaas’s unit in her third year she was immediately drawn to their creative, inventive, progressive design outlook and to the example of the Russian Avant-garde introduced to her by Elia and Rem. What was the significance of Russian Suprematism and Constructivism in relation and comparison to the International Style that had hit a crisis point when Zaha arrived in the 1970s? For her it was first of all the chance to relive the excitement and creative explosion that abstract art had delivered to architecture and all the other design disciplines in the first 2 decades of the 20th century. This creative explosion was especially intense and boundless in revolutionary Russia. Only a small fraction of this experimental creative universe was used and translated into the modernist repertoire of the International Style. Since architecture had to be reinvented once more it seemed like a good idea to dip into this reservoir of compositional innovations, as yet untested, and to continue ‘the incomplete project of modernism’ rather than reverting to pre-modern models. What was striking was the complexity and dynamism of the Suprematist compositions. This aspect had not been taken up by the International Style but seemed pertinent now. Now the time seemed ripe to test the architectural and urban implications of the complexity manifested in the Russian Avant-garde art and utopian designs.

The complexity of our urban lives seemed to be potentially better registered, expressed and facilitated by compositions that allowed for much more variety than the modernist order of repetition provided. The Suprematist compositions of El Lissitzky allowed for all angles (rather than only the 90 degree angle) and experimented with the interpenetration of forms rather than maintaining their neat separation. This is much more in tune with our current interest in functional mility and the search for functional synergies.

To this Zaha Hadid and then Zaha Hadid Architects added the ideas of adaptive distortion and gradient transformations, and the increased use of free form curvature to articulate the dynamism and fluidity of contemporary life. We realized that curvature helps to maintain visual legibility in the face of increasing complexity and facilitates the navigation through complex projects.

Another related point was the new interest in urbanity, urban densification, and the revitalisation of the historical cities through its invasion by new complex projects. This was in sharp contrast to the green field tabula rasa and suburbanisation approach of mid-20th century modernism. Sites were now urban sites, often irregular, with many different adjacencies that needed to be taken into account. Ours was and is the spirit of contextual affiliation, of mining the complexity surrounding the urban site for the development of a project complexity on site. Abstracting graphic site analysis was and remains an important starting point of any urban design project for us.

The landscape analogy became very important to us as a stratagem to increase ground permeability and surface continuity while avoiding the empty vastness of modernist clear grounds. The landscape analogy also suggested ground relief and topography as a structuring device that is more soft and fluid than the dissection of space by walls. It further delivered the idea of gradual transformations and continuous variations instead of harsh cuts of zoning.

The public urban domain was always of keen interest to Zaha Hadid and all of us at Zaha Hadid Architects. This implies a focus on the urban ground condition. We were always intrigued by the modernist de-fortification of sites and the lifting of buildings to let the public space flow into and through the building. However, modernism often lacked the programmatic activation of the ground. In contrast to this we are assuming programmatic density and aim for the further intensification of the ground plane via its manipulation via slopes and its multiplication via cuts and voids. Our interest in long span structures and cantilevers follow from this idea of anti-fortification and ground surface intensification.

Structural sophistication and boldness is also required to carve out communicative voids. Voids that connect across floors as well as between inside and outside are crucial. They make architectural space and spatial relations fully three-dimensional. These are spaces of simultaneity, spaces of flying, where the space extends in layers above, below and all around. All events in a building become inter-aware. More recently we have explored these ideas in towers, with a new type of tower typology where the centre of the tower is opened up with a large soaring atrium that allows occupants and visitors to navigate the diverse offerings and that establishes visual connections where a core would otherwise prevent inter-visibility within and across floors.
Whole Parts

LEATHERBARROW, David

Professor, University of Pennsylvania School of Design, United States

In an attempt to define a place for architectural order other than comprehensive urban systems or market-driven aesthetics, this talk will advance a thesis concerning whole parts, which is to say internally defined architectural works whose intensity and coherence do not isolate them from the city's wider frames of reference, both artificial and natural, but instead provide future works with a model for new—and newly relevant—urban form. My concern is to restate architecture's responsibility, together with its corresponding need for wide awareness. The first is necessarily limited, though non-transferrable, and the second is in principle widely inclusive.

Despite decades of alternately progressive and reactionary claims about dramatic crises in contemporary urban culture, most cities and good urban architecture show a remarkable degree of continuity, no matter whether you consider Shanghai, Stockholm, or Santiago—at least parts of them. Sizes have, indeed, changed. Buildings are taller, infrastructure bigger, and open spaces wider and more heterogeneous—to say nothing about the ever-increasing density and expanse of urban settlements. Yet, in every city's different localities intelligible topography is still very much in evidence, not despite radical changes (which would argue for repetition of pre-modern scale and typologies), nor thanks to them (in the form of big architecture, megastructures, or large scale engineering and landscape projects), but because coherent architectural works can contribute to both the transformation and continuity of cities. Over time, robust cities have the capacity to absorb interventions that initially opposed them. Reciprocal modification—often unplanned by an architect—rescales insertions.

Scale is at issue here, also proportioning, but equally so the productive nature of intelligent and creative architectural projects. Insofar as scale is a matter of relationships, the heart of the issue is difference, or the separateness that allows and sustains mutuality, as if every part were necessarily a counterpart, not despite, but by means of difference. Each example of what I'll call a "whole part" is a striking divergence from the fabric into which it was inserted, but not only that; it is also a kind of adjustment, that indicates the potential (and cultural sense) of transforming the inherited condition. Attributes of whole parts to be considered are chiefly: internal coherence, divergence (from the pattern/system of a well-mannered/managed framework), and new forms of co-operation, the result of which is a project (an urban condition) that remains open for further transformation after construction concludes. Three scales or types will be addressed: tall buildings, open spaces, and infrastructure, in consideration of 20th century works in the city of Philadelphia.

Groundscapes - Other Topographies

PERRAULT, Dominique

Architect DPLG, Urbanist, Founder of DPA Studio, Member of French Academy of Fine Art, Professor at École Polytechnique Fédérale de Lausanne, Suisse (EPFL), Founder of the Underground Architecture Laboratory (SUBLAB at EPFL), France

The architect Dominique Perrault presents his thoughts on the architecture of the "Groundscape". An idea, a concept, the architect has been exploring and experimenting with for many years in his projects
and through his fictions. It is a work on shaping reality, through subterranean architecture, where is not a question of living but of marking and carving out places for urban life in the earth, this epidermis open to the sky.

"Groundscape", a generic concept
Over the course of a number of international competitions and successive projects built regularly punctuating the architect’s chronology since the 1980s, from the Bibliothèque Nationale de France to the the Ewha university, the notion of "Groundscape" as a generic concept became increasingly obvious for the architect, who has come to see it as an authentic extension of the field of architectural practice and even more so as a genuine program. An object of his research at the Swiss Federal Institute of Technology in Lausanne, the "Groundscape" is a landscape of another nature, a place and a resource that extends and enlarges our world.

An engaged architect, an engaged style
In Groundscapes - Other Topographies, Dominique Perrault takes a firm position. He expresses in writing his commitment to this position, presented in the form of a dialog and exchanges of ideas, which are accompanied by a rich and erudite iconography readers will discover throughout the book. The fruit of a series of interviews with Frédéric Migayrou, in this book he explores a range of questions raised by the "Groundscape" (from fiction as method for creation to issues of ecology, engineering, urban planning and geography) and suggests possible ways of tackling them. Thus the architect traces the contours of a new form of urban living: a universe of possibilities, of highly innovative places that either exist, are waiting to be created, or still to be imagined.

Fiction or experimenting with possibilities
Dominique Perrault imagines and conceives fictions, his "Groundscapes", possible futures for architecture, one of which opens each chapter of the book and proposes a different reality for the built environment. He seeks to reveal the available resources we fail to take into account in our urban reality in order to extend the field of architectural intervention. Most of these fictions have been developed for Paris, the city where the architect lives and the cityscape of his imaginary world. The fiction for the Arc de Triomphe set upon a plaza of glass makes it possible to extend the monument, unveil new spaces, and improve the usability of what already exists. In his fiction for the Avenue Foch, he explores the notion of context in an ensemble that is being transformed, the one of the landscape, or entire territories. Facing the economic, social and cultural mutations underway, this is a political, ethical and ecological reflection the architect wishes to share with us.
KS02-3
Tuesday 5th September 2017 / Hall D (3F)
18:00-19:00 (Open to Public)

**Before / After**

CHO, Minsuk  
*Architect, MASS STUDIES, Korea*

Mass Studies has operated as an architectural practice for over a decade in Seoul, responding to a series of distinct geographic, social, and political conditions in constant flux. Consequently, each project has developed from ideas extracted from its own highly specific conditions, each with multiple variables of scale, speed, and economy - small to large, slow to fast, and cheap to expensive - seemingly absent of apparent order. In response to the fluctuating complexity of urban development, and grounded in an obsessive curiosity of the reality in which it operates, Mass Studies has pursued a methodology of “systematic heterogeneity” that simultaneously embraces the general, the obscure, and the unseen as opportunities.

The built and un-built projects of Mass Studies are an on-going cartographic record of ideas over time. Individual projects are less isolated events and more an interconnected assemblage of multiple ideas. With a disciplined method for each architectural pursuit, they include specific combinations of typological, formal, temporal, social, relational, behavioral, and experiential ideas that allow the process of design to take place within dynamic, yet defined, parameters.

To stay abreast of such fluid conditions, the architect must constantly strategize and be responsive to changing contexts. Like the game of Go, each move is both offense and defense, creating a constellation of reactions in an evolutionary process. This requires one to be aware of and utilize everything that came before while projecting what might happen after. Our projects are not concerned with the a priori narrative of an architectural beginning and the physical end of the work. They are rather the conception-to-realization of a building as the in-between performance of a larger recursive process.

KS03-1
Wednesday 6th September 2017 / Hall D (3F)
09:00-10:00

**Local Materials and Appropriate Technology**

state of a sector with potential multiple in Africa

ABOU, Moussa  
*Researcher in Architecture of Earth (ground) and local Materials-Inventor, Niger*

ABOU method has potential for creating green jobs, conceptual performance, thermal, environmental and energy to achieve energy savings and comfort Hygrothermal in buildings. It contributes to the mitigation and adaptation to global phenomena of climate change through the synergy of bioclimatic habitat, thermal efficiency and energetic buildings and renewable energy. The interaction between the building and the environment should provide a new impetus to the construction sector, a mutation across multiple technical and technological developments; make tomorrow's challenges.

ABOU GREEN BUILDING TECHNOLOGY SYSTEM is patented under the numbers 10230, 10231 and 15802 African Intellectual Property Organization (OAPI) Po.box 887 Yaoundé (Republic of Cameroun). Also at the 41st INTERNATIONAL EXHIBITION OF INVENTIONS OF GENEVA – 2013; THE METHOD HAS RECEIVED, PRIZE OF THE EUROPEAN ASSOCIATION OF INVENTORS (AEI) Given by Mr. Joachim BADER, President, to Mr. ABOU Moussa, from Niger, for his construction process for buildings. Light, hydraulic, no cement mortar, no coffering, no clamps.

These technologies are in the actions of mitigation and adaptation in the context of a post-2012 regime regarding the building sector.
Tourism for All
WATTANAVRANGKUL, Kobkarn
Minister of Tourism and Sports, Thailand
Urban Futures: Living in the Inner City
- Regenerating Urban Architecture for Cohesion and Sustainability

Monday 4th September 2017 / Hall D (3F)
11:00-13:00

KF01-1

Learning from Sao Paulo: Enduring and Resistance
MUNIZ, Cristiane¹,²

¹Founding Partner of Una Arquitetos, São Paulo, Brazil
²Coordinator at Escola da Cidade

Venice Biennale, Brazil Pavilion, 2004, 2014; Arsenale Pavilion, 2006
Lisbon Architecture Triennale, 2010

São Paulo is a city that has grown too fast. In 1870 there were 30,000 people. In 1900 there were 240,000 people. In 2016 we are more than 20 million in a set of 39 counties.

To support this unbridled growth, the city has spread throughout territory and the inherited problems of this accelerated and uncontrolled development are many. Installed infrastructure is below basic needs, and most of the time, it has been unilaterally designed. Mobility, housing and basic sanitation are the most serious and urgent, to be updated. One of our tasks is to combine quality of urban floor with these systems. Design these new services on the human scale, from affectivity.

In the meantime, the city was rebuilt itself several times, almost entirely. Benedito Lima de Toledo, professor and historian of architecture, wrote a book São Paulo: 3 cities in a century, with the thesis that we had the city of taipa (adobe), then the city of brick, and then the city of concrete. Thus, the relation with memory for paulistanos is something very delicate. As urban plot is all occupied, but with low density, and contains traces of different epochs, our challenge is to intervene inside the city. To reveal our lost geography, with specific topography, rivers and streams. An understanding that built heritage as well as its memory is a specific urban good that must be valued, enhanced.

KF01-2

Envisioning Growth:
Berlin, from Model to Laboratory
WANG, Wilfried¹,²,³

¹Architect, Hoidn Wang Partner, Berlin, Germany
²Deputy Director Architecture Section, Akademie der Künste, Berlin, Germany
³O’Neil Ford Centennial Chair in Architecture at the University of Texas at Austin, United States of America

Cities are civilization’s most complex edifices. They are the result of a series of sometimes coordinated and at other times haphazard decisions, taken by generations of those in power and of those with money; speculators, activists and antagonists alike; of course, involving government bodies and corporate companies; royalty, politicians, bureaucrats, medics, engineers, architects and people voting with their feet.

Cities work. In one way or another. Even if they are chaotic, getting around them is a game of jumping from one means of transport onto another. Even if it takes hours to get to work. And that’s just in one direction. City dwellers get used to things, humans get used to things, we easily grow accustomed to
circumstances, even if they are unbearable.

So, while cities might just about "work" today, not to speak about those that don't, what will they be like in 2050? Currently 54% of the world population lives in cities, by 2050 it will be more than two thirds according to the United Nations studies.

What will the urban population be like in 2050? How will the urban population live? Will the population density be the same, and spread out over a larger area? Will it be denser? Will there be new cities as a way of managing quality of life?

Most importantly: who will be deciding how we will be living and in which physical and spatial contexts? Should we leave the growth of cities to the free market? Do developers really know best what people want? What if there is a problem with what people want on the one hand, were these wishes projected into the future of 2050, and what on the other hand the world can sustain by then?

In other words, if we are to take the topics of "social cohesion" and "sustainability" seriously, can we leave the development of cities to haphazard decisions and the free market? Experience has shown that developers tend to offer orthodox building types specifically for clients with access to adequate finance. Future generations of urban dwellers, however, will not necessarily conform to this baby-boomer lifestyle. The future urban dweller is more likely to be more homogeneous than we think:

- a child of parents from different parts of the world, neither children nor parents necessarily living in the same country in which they were born
- a person with a mixed career path of multiple, project related jobs; in other words, a person with a precarious income
- a person without any illusions regarding a sense of a stable job, of a notion of "home", of a static allegiance to a place/a city/ a country

If we set these urban dwellers in the context of the larger changing parameters such as

- climate change
- migration
- population growth

we can ask ourselves how, in the absence of active decision making by politicians and traditional developers, we as architects should address the future?

Added to this, we have a lot of unresolved and "oversized" baggage of the last decades to carry with us:

- the legacies of functional segregation and suburban sprawl
- neglected and decaying inner cities
- the reliance on the car as a mode of transport
- the enduring damage cause by neo-liberal policies on public space and public infrastructure

And, to make sure that our task vis-à-vis the city of the future is not too easy, we have also learnt the following in the last decades:

- wholesale urban redevelopment is both a socio-economic as well as a design error of enormous proportions; we should adapt, amend and continue to build on the existing fabric
- every piece of existing fabric needs to be understood on its own before it can be adapted, amended or densified; everything needs not a tailor-made but an architect-designed solution
- in democratic societies, the involvement and active participation of the city's population is a key component in ensuring the successful realization of urban developments, large and small
- there may be an ideal size for cities; cities may not be expandable ad infinitum or ad nauseam; we may have to found new cities next to existing ones

**Berlin: from model to laboratory**

Over the past two centuries, Berlin has evolved into a model city. From industrialization and interwar
modernism to hipster and start-up capital, Berlin has witnessed militaristic emperors, fascist dictators and currently a seemingly benign mother of all chancellors, whose political style sedates opponents and the public alike into grateful submission. As Berlin enjoys the fruits of visionary urban design of the mid-19th century, the city can justifiably be proud of its social and ethnic mix, its impressive cultural and technical infrastructure and a attractiveness that each year draws around 50 000 new inhabitants. Having emerged from the darkest era of the Hitler Regime, and benefitting from the impetus of reunification, today the nation's and the city's political classes show no ambition whatsoever to deal with the challenges of the future.

On the contrary, the scandal of the unfinished BER airport, the lost plebiscite on the peripheral development of the former Tempelhof airport and the imminent threat of losing the next plebiscite on the continued use of the existing airport of Tegel have inscribed themselves deeply into the psyche of Berlin's politician, to the extent, that no politician has been bold enough to project a vision for the city's future.

Meanwhile, the modest goal of building 30 000 residential units in the next five years, 6 000 per year, is hampered by the inevitable protests from affected neighbors of potential building sites, so-called NIMBYs. In the wake of official inaction on conscious urban development, a few noteworthy private housing schemes have been realized, mostly initiated by middle-class cooperatives. However, as important and innovative as these projects are, they will neither solve Berlin's future demand in development nor will they act as a model for other cities.

Berlin, like most other cities around the world, needs a constant public debate on its future in terms of its anticipated population and its potential diverse lifestyles on the one hand, and on the other hand how the city is preparing itself to be the container, or the enabling framework for the increasing discerning global citizen.

In order to contribute to this desperately needed public debate, a group of five architects, who are also teaching at a variety of universities – UT Austin, Potsdam and Navarra – have started a three-year cycle of studios with annual exhibitions to demonstrate the thrust of the urban and architectural design research topics.

These cover the following:

• inner city densification of housing schemes from the 1950s to the 1980s
• urban transformation of former industrial sites while maintaining architectural monuments
• intensification of urban arteries as seeds for an appropriate metropolitan scale
• urbanization strategies for suburban sprawl
• identification of appropriate sites for high-rise clusters/developments
• definitions of what the future image of the city might be

Berlin can once again become a laboratory for the future of cities if it recognizes the role that politicians, specialist planners and the public have in leading a sustained structured debate on the future of cities. All participants must recognize that such a sustained debate extends beyond one election cycle. All participants must understand that urban development has to be both understood and undertaken in the context of the city and its region. All participants must realize that urban development in the 21st century is more arduous and potentially conflictual than pre-enlightenment models.

In comparison with most other metropolitan regions, Berlin boasts a surfeit of programmatic and physical infrastructure. How can the city build on these qualities to ensure that the forms of urban development both strengthen social cohesion while also being sustainable?

Berlin needs to embark on a public debate that confronts these topics head-on. The group of five architects are making their contribution that ultimately culminates in a range of visions for Berlin 2050.

A society without a vision of its future is a society without a future.
The Open City

PEPONIS, John1,2

1Professor, School of Architecture, Georgia Tech, United States of America
2Registered Architect in Greece in collaboration with Kokkinou and Kourkoulas Architects

At a time when more than 50% of the world’s population lives in cities we confront three major problems: First, social inequity, due to the internal and geopolitical dynamics of economies and societies, continues to be associated with areas of urban plight and with the fragmentation of cities. Second, man-induced climate change threatens environmental sustainability, health and well-being. Third, digital technologies transform the ways in which we inhabit built space and require us to reassess the functions of face-to-face society and of place. Against this background, the relationship between cities and civilization cannot be taken for granted but must be actively built according to shared values.

This implies the need for clarity as to what the fundamental advantages from living in cities are. By bringing a large and diverse population in close contact cities intensify communication and exchange and accelerate the creation of knowledge, division of labor, productivity, creativity and innovation. Urban agglomeration also brings economies of scale with regard to infrastructure. In the terms of recent analyses of large samples of cities, the relationship between city size and the creation of wealth is superlinear while the relationship between city size and infrastructural costs in sublinear.

At the same time, cities are linked to the development of culture, forms of expression, modes of socialization and distinct patterns of subjective experience. The link between their economic dynamism and their cultural richness has long been recognized even as it has been recently emphasized with reference to the ‘creative class’ that powers contemporary advanced economies.

Finally, in many parts of the world, there has been a historically contested but strong connection between the development of cities and the emergence of the public sphere of contemporary democratic societies. The public sphere is continuously being redefined as a function of changes in economy and the constitution of society. The cultural role of public space is at present transformed or, sometimes, impoverished. However, the discussion about the relationship between the public sphere and publicly accessible space remains central to the design and planning of cities.

Our understanding of the nature of cities sets the framework for architectural and urban design intent. One critical question moving forward is whether testable knowledge can bridge between broader values and design program. After all, the gap between aspiration and effect that was associated with modernist ideas of good city design has contributed to a protracted emphasis on the expressive functions of architecture. For quite some time, we have celebrated our exploration of what is possible and shied away from the identification, evaluation and advocacy of what is better. It is important, therefore, that our renewed interest in program be grounded upon a research knowledge base.

Another critical question is whether we can identify architectural and urban design contributions that have intrinsic value while also working towards the resolution of larger problems that require collective interdisciplinary effort. Here I will limit myself to a topic that has received much attention, the design of streets, as the long term framework for the evolution of urban architecture and culture. I will focus on street network connectivity, alignment and configuration. I will do so from the perspective of space syntax, one of the most robust and productive paradigms of architectural research that has evolved internationally in the last 40 years.

The connectivity of street networks can be described in terms of two different kinds of centrality, closeness and betweenness – how far everything is from each location, and how many paths connecting other places go through each location. Distances are measured not only in terms of length but also in terms of direction changes or path rotation, in a way that makes the analysis of network connectivity sensitive not only to the density of street intersections but also to the geometry and alignment of streets. The ability to understand network properties complements our understanding of the importance of dimension: for example those smaller urban blocks help balance pedestrian and vehicular movement while larger urban blocks promote vehicular movement only.
Research has led to precise quantification of the effects of the objectively measured spatial structure of streets: First, the structure of street networks determines the distribution of movement in an area, even after taking into account the distribution of land uses. Second, it is associated with the distribution of land uses, particularly retail. Third, is linked to the way in which street networks are perceived and mapped cognitively. These findings support the view that the functionality of street networks is linked to their intelligibility. Intuitively we all feel that the intelligibility of cities contributes to making society and culture intelligible. Now, the idea of ‘the city as the theater of life’ can be rigorously defined and measured.

I advance four propositions on the socially and culturally open city that are grounded on this research. First, the open city supports patterns of visible co-presence in public space in all of its parts. Its intensity varies according to patterns of local and global centrality. Co-presence creates a sense of virtual community that often cuts across social and cultural boundaries. Second, the open city supports distributed patterns of attraction and interest so that reaching a place provides an opportunity for exploring its surroundings. This helps spread and diversify opportunity for different actors. Third, the open city interfaces scales of organization so that the identity of local places is enmeshed within metropolitan connectivity; local places are defined by their hubs, not by their boundaries which can overlap or blur – in this way a city is indeed not a tree. Fourth, and most important, the open city is intelligible; it not only allows that particular destinations be reached with cognitive ease, but also that new environments be explored with confidence.

These propositions are fundamental to the creation of dense, inclusive and diverse cities that enrich the lives of their citizens. They are intrinsic to street networks as social infrastructure. The underlying values which they express can be stated in the words of Dewey and of Tolman. Dewey was well aware that the formation of human character is rooted in face-to face intercourse in the family and neighborhood, but that human fulfillment and creativity depend on translocal associations. He called for the cross-fertilization of those two poles of human life. Tolman proposed a distinction between narrow band spatial learning, that satisfies some particular need, and broad band spatial learning that provides the resources for dealing with new problems. He looked to address the causes that limit broad band learning, whether these result from individual predisposition or from lacking environmental affordances. In helping to link the scales and ranges of human interaction and in helping the development of broad band learning architects and urban designers have a significant contribution to make to urban culture and to the benefits that arise from the human capital of cities.

Seoul Re-Visioned

KIM, Sung Hong

1Professor of Architecture and Urbanism, University of Seoul, Republic of Korea
3Curator, Korean Pavilion, Venice Biennale 2016

Seoul stands today as a city rife with architectural contrast. On the one hand, mega-scale urban projects have spawned the high-rise apartment buildings that are ubiquitous across the cityscape, leading some outsiders to criticize Korea as the “Apartment Republic.” On the other hand, Seoul has long fostered the development of medium-size multifamily houses which were designed on purely pragmatic grounds by local builders and developers without professional design training. The domination of these two building typologies in Seoul was largely driven by two major urban planning projects that were used from the 1960s onward: Land Readjustment (LR), which built low-rise to medium-rise residential and mixed-use buildings, and Housing Site Development (HSD), which oversaw the erection of large scale high-rise apartments and commercial buildings. The areas transformed by the two projects represent nearly half of the urbanized area of Seoul today.

These two urban planning projects have each made a mark on the urban fabric that stand in sharp contrast to one another. For example, the average size of the apartment complexes at Mok-dong, the first new town solely grounded in HSD principles in Seoul, is over 130,000 m2 with more than 25 buildings for 1,700 households. Compare this to the adjacent areas governed by the LR project, with an average plot size of 270 m2. The land use pattern of the HSD areas resemble an avocado in that...
the pericarp (Residential Zoning) encapsulates the seed (Commercial Zoning). By contrast, the perimeter of the LR block is bordered by either Commercial or Quasi-Residential areas in a linear pattern, while the inner blocks are divided into Class-3, Class-2, or Class-1 General Residential areas. The horizontal shift of zoning within a block in LR areas can be likened to an onion. Entering a block is like peeling a layer off; you see more onion, but the onion is getting smaller.

Because of the compactness of buildings, together with narrow adjacent roads and an insufficient parking space, the LR areas were less favored by the upper middle class, who wanted to own the more profitable apartment unit. In fact, the medium-rise structures of the LR projects may well have all been replaced by high-rise apartment buildings if not for the global economic crisis of 2008 that served a death blow to Korea’s construction market. Economic profits of large-scale redevelopment and reconstruction were no longer guaranteed, and so many of the urban projects fell into gridlock and have since been cancelled. As it stands today, more households still live in medium-size multifamily houses than in apartment buildings.

And so Korean urban architectural planning stands at a bit of a crossroads today. Clearly there seems to be a need to bring more cohesiveness, more wholeness back to the city, but the way to do that isn’t immediately clear. Besides the economic uncertainty that remains, architectural development in Seoul is impacted by demographic changes brought on by lower birth rates, a decrease in population, an increase in the number of single households, and an increase in the number of elderly. Given these factors, what hopes and aspirations can be held by architects and urban planners seeking to enhance the city’s character and improve the openness and inclusiveness it offers its inhabitants?

One promising sign has been a new focus of the younger class of Korean architects since the economic crisis: the reconstruction and regeneration of the traditional small and medium-size typology, one building at a time, within the LR project areas. A decade ago, these types of projects got little attention from professional architects, as it was thought that this form of architecture would become outmoded and swept away by the large-scale projects that were so prevalent. However, due to the factors mentioned above, this kind of architectural endeavor is gaining momentum in Seoul today. While the buildings constructed respond to market demand—the desire for maximum floor area and volume—they also demonstrate innovative design strategies and tactics that help create a richer interface between architecture and the city. A whole range of diversity in the size of residential units, the mixture of programs, the processes of design and construction, and the extent of public/private cooperation is now being covered by this growing initiative.

It is hard to say whether the city of Seoul will permanently turn its attention to piecemeal transformation, but it seems that we are seeing the emergence of a distinct urban architecture, albeit on a smaller scale in the LR project areas, but one that provides an important opportunity for budding development agencies and young architects in Korea. And as this new economic dynamic stimulates small and medium-sized business in the core of the metropolis, it delivers a slow but resilient form of urban regeneration that is welcome in Seoul’s unique urban fabric, putting a new emphasis on the quality of the lived space and its relation to its surroundings. Ultimately, the decline of large-scale reconstruction projects in Seoul may turn out to be a great blessing; the work being done to ameliorate the medium-size residential and mixed-use building typology seems to be facilitating better social interaction, and will undoubtedly have a positive impact on those living and working in the inner city.

(The ideas presented here were adopted, modified and merged from the research papers, books, and essays of Sung Hong KIM. A complete set of references will be included in the UIA 2017 Seoul proceedings.)
Keynote Forum 2

CULTURE: “DESIGN WITH HISTORY”

Tuesday 5th September 2017 / Hall D (3F)
10:00-12:00

KF02-1

Towards a Reflexive Regional Architecture

LI, Xiaodong
Architect & Professor, Tsinghua University, China

Today, it is impossible to identify a common system of values within pluralistic China, where reality is chaotic, unpredictable, and hence ultimately unknowable. Hazard has become the principle by which daily operation is increasingly influenced by the mass media and by the collective impact of decisions, which have been decentralized through economic and political institutions. The tendency is to perpetuate values designed to optimize the normative and the consumptive aspects of a society that serves the needs of a growing middle class in its search for self-determination. The new challenge in architecture today in China is the question of whether one can act independently from the psychological and social forces inherent within this environment. A possible response to the question is that architecture cannot escape an active engagement in the issues and conditions of our contemporary society. We cannot stand apart from or above these issues, be they social, ethical, cultural, technical or ecological, because it is only by facing them that we may find a significant subject for our art. But having acknowledged this, it is equally clear that subject should not be confused with act. Architecture reflects thought — but architecture also provides a particular way of seeing and speaking about things. For Chinese architecture, it is important that this language remains open and conceptual in nature — that it does not replace investigation and that it is able to assimilate the specific aspects of a given project.

Building practice in China since 1979 has witnessed an explosion of quantity and variety. Never before in its history have so many architectures been proposed and quickly implemented. Yet, among the mass collection of styles and forms completed during the last twenty years, there is no single building that could claim the originality that belongs to the Chinese architect. The aesthetic value and orientation in the transition period has been a matter of choice, rather than that of creation. The question still remains as to what has been achieved, and how appropriate it is, in the architecture of eclecticism in the face of the new constraints that confront all people in their everyday lives in China today. As we have seen, at its worst, it resulted in superficial and bizarre concoctions of elements without underlying integration. At its best it could lead to works of dense meaning. However, formalist architecture has not resolved the problem that revival or borrowing could not really be considered apart from the question of appropriateness in the present.

Surely, it takes time to digest the technological means of production of buildings and architecture as a form of cognition, which has already reached an extreme degree of sophistication in the developed countries. The rights of the individual and freedom of expression are yet to come in a country still dominated by a master narrative. But, what truly has limited Chinese architects in the last two decades is their propensity to bypass the question of the essentials in their anxious effort to respond to formal ones. It is crucial now that the young generation of Chinese architects moves beyond exclusive, insular, fragmented formal tendencies towards a more inclusive, essential and coherent global one, which recognizes the question of morality and rationality as central to an architecture in a fast-moving society.

The failure of Chinese architecture of the last two decades in expressing the contemporary ideal of environment, technology and human dignity was due to the lack of theory, of a higher level of abstraction capable of giving a better grasp of the role of architecture and a better sense of direction. Architects have a major obstacle to making critical comments on their surrounding reality while at the same time bearing their own professional devices in a penetrating, analytical way. Also, the void of Chinese architecture in respect of morality and responsibility resulted in architectures which were either posed
or obscured in formalist complexes.

The Chinese renaissance in architecture is still to come. There is no reason to be disappointed however, as China is getting more open and free. Originality need not be the making of something out of nothing. It includes generating new things through an elaborate process of re-using past experience and design knowledge in unknown future contexts. The more variant and numerous the experiences, the greater the potential for genuine design, and the better and innovative response. In this sense, the projects of the last three decades, though not masterpieces yet, are important precedents formed the in midst of acute social, ideological and technological transition unprecedented in Chinese history, from which a more convincing architecture is to be born.

Reflexive regionalism – my response

Based on what is prescribed in the previous analysis, it is the moment to initiate some tests in practice, from which, what was discussed in text could be reflected in ‘forms’. However, I have no intention here to promote the ‘form’ as a blueprint. It, at most, opens up possibilities. This is why that I dare not to use the word “contemporary Chinese architecture” to describe my practice, but “reflexive regionalist architecture”. Here, to be “reflexive” as in ‘dialogue with’ a situation, through which, an objective understanding of the situation could be established; to be “regional” is here different from the ‘picturesque’ or, ‘iconic’ regionalist architecture (by which, architecture was understood as a tool to demonstrate a cultural presence as a fixed entity), what we are proposing is to understand the “regional” as comprehensive, dynamic and sustainable ‘condition’ of place – a tabula rasa, that solutions could be based on and emerged from.

As such, each project should be unique and should add uplifting spiritual characteristic of the project to the built environment. The design of building, starts, in the creative spatial organization of life – not in style choices or concept analyses, but in the identification of new spatial constellations; not in the spatial allocation and accommodation of a given program, but in helping to create a spatial organization for multiple programs; not in making things in space, but in organizing processes in time; in short, not in the object, but in performance. This architecture is not about superficial beauty, but about results. Eventually, architecture turns out to be an unparalleled field of innovation.

Our design strategy starts with a careful analysis of the program and site in relation with the resource which will play central role in the overall integration of ideas. The concepts are conducted by both cultural and climatic environment of context and seek to capture the spiritual essence of “place”. The designs strive for tranquility and harmony suggested by space, light and structure order. Fixed architectural styles are avoided, as they limit potentials to be unique and creative. However, precedents of past experiences and knowledge are important for us to study to provide a solid background to solve new problems in hand. We believe that a good design product is the result of spiritual exploration of ideas with rational thinking, it engages with both.

KF02-2

Landscript

SEUNG, H-Sang
Architect, IROJE, Republic of Korea

In 1986, the town of Harburg near Hamburg built a monument in a small plaza in memory of the town’s resistance to the Nazis. The design by Jochen Gerz (1940-) was selected through a competition. It was a simple form, 1 meter by 1 meter square and 12 meters tall. Gerz’s astounding idea was that every year, the pillar would sink 2 meters into the ground until it disappeared. We think of monuments as immortal obelisks that rise to memorialize an event. But this obelisk has now disappeared. As it sank, the citizens of Harburg would record on its surface the pain and oppression they had suffered under fascism. In 1992, exactly 6 years after its erection, the pillar was completely underground, leaving only the memory of a monument that once stood there. The citizens of Harburg were able to find reconciliation and forgiveness.

The architect Min Hyunsik (1946-) has claimed that “in the new era, monumental structures that symbolize political power, religious might, and the invisible force of capital must disappear...Our
landscape must be integrated with its surroundings, created by figures pulled out from the conditions of the land. Such is an ethics of man and nature, a spirit that must be upheld as the goal of the new millennium - an era of multi-centered pluralism that places the identity of the singular, the restoration of the everyday over development and totality. Min has underscored that “we must today revive our old spirit of harmony with nature, a tradition that perceived the heavens, the land, and man as one.” The aerial photographs of ruins in George Gerster's (1928-) Past from Above are moving testimonials. They are not just pictures. They make up a book that expresses the embedded history of the land: it is a grand historical text, a monumental documentary, and a stirring saga. Buildings and cities, all irrevocably tied to the land, are patterns on the land, the communal testimonies of an era.

Our ruins provide no less of an inspiration. Unlike the West, where the stone remains last for a long time, our old cities and buildings, made from earth and wood, almost completely disappear. With only a few foot stones remaining, our ruins present us with emptiness. For this reason, the testimony imbedded in this emptiness, like the lost pillar at Harburg, is the more poignant and thus more lasting.

Hisao Koyama (1937-), the Japanese architectural scholar, has written on the importance of the memory of place: “Place can only be perceived as the layering of culture, that is, as tradition. In the continuous layering of time, a place is a where many different events occur. It is the basis for a human community to come together as one. Place is the foundation and central support of community.”

Let me bring in a few more words from Italo Calvino’s (1923-85) Invisible Cities. “The city contains its past like the lines of a hand, written in the corners of the streets, the gratings of the windows, the banisters of the steps, the antennae of the lightning rods, the poles of the flags, every segment marked in turn with scratches, indentations, scrolls...the city may really be, beneath this thick coating of signs...those that through the years and the changes continue to give their form to desires, and those in which desires either erase the city or are erased by it...The catalogue of forms is endless: until every shape has found its city, new cities will continue to be born. When the forms exhaust their variety and come apart, the end of cities begins.” For Calvino, the city is a living thing in which memory and desire are inseparably intertwined.

Indeed, like our fingerprints and the lines in our palms, the memory of the past remains imprinted on all land. As every fingerprint is unique, so is every piece of land. Sometimes its pattern is created from natural history, sometimes it is a pattern imprinted through the continuity of human life. The record and story of our lives are written on the land. The land is thus a grand and noble book of history, and thus is precious. This is the landscript.

This landscript is an ever-changing organism and a life force that demands that something be added to it. It has a soul, a spirit, and it speaks. According to Susanne Langer (1895-1985), if architecture is the visualization of the character of a place, architecture must begin by carefully listening to the new demands of the land. It is a land that has experienced the great expanse of history. Architecture is the respectful act of revealing its fascinating language; it is the act of thinking deeply and then humbly adding to the land by building on to it a new poetic language.

Architecture will inevitably fail. Monumental architecture is built to glorify its patron. Boasting their great technological achievements, they may rise into the sky in the service of people in power. Yet as everyone dies, architecture cannot defeat time. Only the memory that we were once there remains. That is the only specific truth.

Memory of Places

KUMA, Kengo

Architect & Professor, the Graduate School of the Department of Architecture, the University of Tokyo, Japan

I think that the memory of places is more important than the memory of buildings. Cities in Japan in which buildings were made from wood were often ravaged by fires. However, cities were rebuilt and restored based on the memories of people. This kind of resilience and power of memory enabled culture and history to continue without interruption. This power of memory does not simply consist of the ability
to remember the shapes of buildings, but rather extends to the surprising ability to remember the
ambiance of streets and the city as a whole. I think that this comprehensive memory is in essence the
memory of places.

I have been involved with many jobs that consisted of the preservation of buildings, during which I
focused on this type of memory of places, and took great care to carry on this type of memory.
For example, when I was involved with the project in 2010 for the Kabukiza Theatre, which is a shrine
for the most important performing art culture in Japan, in addition to reproducing the materials and
details of the building, I thought that reproducing the ambiance of the alleyways around the building
was important. The ambiance of alleys in the yesteryear of the Edo Age has been lost due to automobile
traffic in the 20th century, but these alleys were more than this. They were outdoor places that were
integral with Kabuki theatre, where people performed impersonations and street performances. We
thought that it was important to reproduce the ambiance of alleys beside the Kabuki Theatre.

I am currently most interested in preserving and reviving places, including this type of culture as a whole.

KF02-4

Cultural Memes as Means of Regionalism

JEON, BongHee

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Contemporary frontiers of 21st century mostly pay attention to the modern period closer to this moment
when ‘history’ is brought into conversation. There are two different shades behind this tendency of pursuing
the nearest past. One would be the ‘traditionalism,’ and another is so-called regionalism or locality. The blind
drive to chase after the tradition or regional distinctiveness in architecture was especially strong in East Asian
countries. It is mainly because our modernization process happened rather rapidly with the undefined stance
between internationalism and imperialism and also because modernization was almost equated with
westernization. As a result, traditionalism appeared in return for sympathies generated from sudden rejection.
Identifying the difference in traditionalism and regionalism is challenging, but there is a certain contrast in the
attitude of how to carry on the legacy while inducing contemporary values. Traditionalism often sinks into the
pit of one-dimensional mimicry of form, space, and/or material while for the means of regionalism, tracing
cultural memes shown in various aspects such as lifestyle, cosmology, philosophy can be helpful in featuring
the nowness of contemporary architecture.

Memes are an extensive network of historical evidences deeply rooted in our culture. To understand its
role in overcoming the unilateral traditionalism and build up proper attitude towards the regionalism, it
is imperative to look at the trajectory of East Asian architectural traditions. China, Korea, and Japan
share the wooden tradition of East Asian architecture, the use of post-and-lintel wooden architecture.
The most distinctive feature comes from the roof construction; it consists of layering horizontal and
vertical components rather than braces to support roofs as shown in European timber architecture.
Other than roofs, another notable feature is the use of brackets on the pillar heads to fix the end of
pillars, beams, and purlins in place. China, Korea, and Japan all use them, but the composition and
ornamental style of bracket units differ according to region and time period. Even though East Asian
countries share the same origin, alterations also have arisen through the times. From the Middle Ages,
in contrast to China, Korea and Japan actively utilized raised floors, lifting the floor from the ground with
supporting wooden pillars. This may have resulted from climate issues or greater exposure to the
dissemination of maritime culture. Furthermore, Koreans developed a unique type of floor based on the
heating system called ondol. An ondol floor is made of stone, which is hard as the ground, unlike tatami,
a Japanese floor mat soft as the carpet. These differences in floor types eventually influenced the space
usage patterns, thus proven to be intrinsic memes of each country that convey distinctive characteristics.

East Asian countries not only share the wooden structural traditions, but also the materialization of
philosophical backgrounds stemming from teachings of Confucianism and Taoism from ancient China and
partly Buddhist doctrines originating in India but also indirectly influenced by Orient civilization’s symbolism
when transmitted into Asia. East Asian traditional architecture has fewer buildings of monumental scale
compared to other civilizations that boast of such structures as pyramids or ziggurats, gothic cathedrals,
and baroque palaces. The ideology on ‘eternity’ lies here. Our ancestors believed that eternity lies in spirit,
not something with tangible form like architecture. Also, instead of monumentality shown through height like the Babel Tower of Christianity, the ideal land of Taoism emphasized depth. The term “nine-fold palace” (九重宮闕) emphasizing a deep, multi-layered space through aligned doors for enclosures is a Confucian adaptation of Taoism ideals. This spatial layout is concerned with the establishment of a hierarchic system for buildings with an axis as well. Buddhism and Christianity take East-West axis while Confucianism sticks to North-South. For example, Buddhist temples in India strongly show the East-West axis, and some of earliest temples in East Asia also had a similar orientation due to their influence. However, soon, most of temples implemented North-South axis, conveying Confucian values.

However, there was also the time when Buddhism was covetous of height shown through pagodas, especially in Tang Dynasty which took the stance of internationalism. Then, the next generations of Neo-Confucian scholars in 12th century began to accentuate nature. They regarded nature as tour-de-force and accepted the fact that human beings are a part of it. Many extant cases reflect how much Neo-Confucians dreamt of “naturalness” or the oneness of people and nature. Korean gardens like Soswaewon, Japanese villas like Katsura Rikyu, and Chinese landscape paintings are the perfect manifestations of this ideal of minimal structures in the midst of nature. Then, since 14th or 15th century, Chinese, Korean, and Japanese architecture began to diverge the developmental directions. For example, planning of Edo(Tokyo) in Japan, Seoul in Korea, and Beijing in China are all distinctive examples of each country.

While sharing the same origins and philosophy of East Asian architecture, China, Korea, and Japan had shown regional differences and divergent historical evolutions during the 2nd millennium and the respective twentieth century which has formed our ownness. Our modernism started with westernized modernism but now finally has become ‘Eastern modernism.’ Our former generations regarded traditionalism as their duties to find our own distinctiveness in the turbulence of rapid Westernization, thus sinking into the shortcomings of the mysticism of tradition or excessive worshipping. Regionalism is still a bit ambiguous and polysemic; it ranges from a rationalist to a formalist as in traditionalism. Even the critical regionalism which aims for achieving the universal values of modernism and pursuing tectonic approaches to disregard the whimsical individualism, it is ambiguous to realize what ‘tectonic approaches’ are unless we thoroughly understand what we have. So we should attain the attitude of selective acceptance of cultural memes considering the present needs and aesthetic means according to individual critical reasoning. In other words, unlike former generations who sought for collective solutions to manifest Zeitgeist, our generations rather value personal reasoning and philosophy such as “reflective regionalism,” “landscript,” or “memory of places” as mentioned by participating speakers of this keynote forum. These independent longings allow numerous opportunities in expression methods, but what is obvious even in these days is the presence of alive memes. Any architecture clearly demonstrates its identity whether it is due to atmosphere of the region, construction environment, and stance of an architect. Cultural memes have always revealed their metaphysical presence without our acknowledgement, but proper understanding falls to our share.

Keynote Forum 3

NATURE: “HUMANE GREE ARCHITECTURE: WHISPERING WITH THE GREEN”

Wednesday 6th September 2017 / Hall D (3F)
10:00-12:00

KF03-1

An Attitude, Not a Typology

THORSEN, Kjetil Trædal

Founding Partner & Director, Architect, MNAL, AIA, Hon FRIBRA, Dr.H.C., Snøhetta, Norway

Over the past 30 years, Snøhetta has established itself as a world-leading architecture and design practice. Founded on a vision of uniting architecture and landscape into one holistic approach, the
practice has developed into a global interdisciplinary firm working on projects within architecture, interior architecture, landscape architecture and brand design.

Fundamental to all Snøhetta’s work is a commitment to sustainability, whether environmental, economic or social. Whether it is preserving and carrying forward cultural heritage at Lascaux IV, ensuring high-quality scientific functionality thanks to the landscape at Max IV Laboratory, promoting social agendas by inviting people to walk on the roof of the Oslo Opera House, or making the Norwegian National Parks accessible to all through graphic design and wayfinding, Snøhetta strives to keep sustainability in focus throughout all its projects.

Undertaking today’s environmental issues, Snøhetta is currently involved in several initiatives aimed at challenging the status quo of the notion of sustainability in architecture. As partner and lead architect in the Powerhouse collaboration, the practice is committed to developing and constructing energy-positive buildings. Powerhouse Kjørbo was the collaboration’s first completed project and included a renovation of an existing office building into one that would produce more energy than it consumes over the course of its lifetime. Other pioneering projects, including the ZEB Pilot House, has helped push the boundaries of green architecture, while also leading the way for initiatives such as Zero Emission Neighborhoods.

Most recently, Snøhetta started a collaboration with the Harvard Center for Green Buildings (CGBC) at the Harvard University Graduate School of Design to retrofit CGBC’s headquarters in a pre-1940s timber-frame building, becoming one of the world’s most ambitious sustainable buildings. As a research project, the program seeks to create a prototype of ultra-efficiency, rapidly reducing the level of reliance on energy-intensive technology while simultaneously creating comfortable indoor environments.

As part of the Norway 203040 Coalition, founded on a shared ambition of making a substantial contribution to Norway’s low carbon transmission, Snøhetta is further working towards the Norwegian government’s goal of reducing the country’s CO2 emissions from 1990 levels by 40% by 2030.

Snøhetta believes that sustainability should be viewed as an attitude rather than a typology. While architectural typologies shift with societal developments, sustainability should always play a key role when approaching a project. At the UIA 2017 Seoul Congress in September, Founding Partner at Snøhetta, Kjetil Trædal Thorsen, will dive deeper into this philosophy, exploring the practice’s approach to sustainability up until today and in the years to come.

KF03-2

Cultivating Culture from Nature

Integrated Planning and Design Concepts for Academic Environment

TERAYAMA, Thomas

Architect, Nikken Sekkei, Japan

Umm Al Qurra University, Makkah, KSA, - 2014 ~ongoing
Shibaura Institute of Technology Toyosu Campus, Tokyo, Japan, completed 2006
Okinawa Institute of Science and Technology, Okinawa, Japan, completed 2012

Our ancestors in primordial settlements have dealt with nature for generations. For survival, they have domesticated plants, delineated boundaries from wilderness, and built shelters to endure weather through seasons. In essence, human settlements are physical manifestations of how civilizations have contested and embraced nature. Over generations, cultural traits such as customs, rituals, and social hierarchy had emerged and evolved in these settlements. Therefore, cultural diversity is innately correlated to its local environment. (Norberg-Schulz 1979:58). Successful settlements and their construction technique are passed down and replicated through generations. As demonstrated in the theory of evolution, the most sustainable model is imitated, replicated, and become widely accepted for further adaptations. Eventually they become recognized as vernacular styles, collectively shaping urban forms of a region. However, human settlements are inherently lifeless, destined to be reclaimed by wilderness without people to sustain them. Historic ruins are testaments to the cultural riches of a bygone era. An empty vessel, or a corpse that once cultivated living culture, but ceased to do so once equilibrium between people and nature had broken. In fact, sustainability is a working engine that brings
“soul” into an environment and supports living culture by establishing dynamic equilibrium with nature.

Just over a few generations, many developing societies have exploited natural resources in pursuit of economic growth, while divorcing themselves from the natural environment. (Meadows et. al 1972). As a result, a new kind of cities have emerged, enabled by new innovations in building technologies and infrastructure. This transformation has brought about dilemmas, which can be explained in terms of how designers and engineers address the relationship with nature. For the past decades, our cities and buildings were planned as economic problems, and natural environment was perceived as an element to prevail over. Desire for rapid economic growth necessitated zoning, which radically transformed the pre-existing urban fabrics. Network of highways and mass transit systems enabled long distance commute away from homes. Offices and housing blocks are designed for optimal utilization of land and occupants like mechanical systems. In effect, our cities have become colossal machines for economic progress, while neglecting the natural context which had cultivated its cultural identity. On the other hand, designers have sought to recreate cultural identity by borrowing features of traditional buildings and urban forms. Often times, such vernacular forms and architectural typologies were taken out of context, and reintroduced as decorative elements without functional or spatial implications. They have become eclectic and historicist elements, becoming symbols and notations as mere representation of the original cultural contents. The symptoms of such design dilemmas are seen as prevalence of anonymous buildings and places, often exemplified by central business districts and large scale redevelopment projects of the new globalized economies. As a result, life styles are becoming more predictable regardless of their natural environment, with fleeting memories of the cultural heritage and their original identities. (Zukin 2009). The question lingers: can the cities of tomorrow inherit and grow cultural diversity of the past, while achieving economic and environmental sustainability? As Eiji Maki (in Ray-Jones 2000:10) has pointed out, it is not possible to simply replicate traditional design solutions, as lifestyles have changed, as well as regulations and available materials. Building typologies have changed too. High-rise buildings have specific characteristics that render the direct application of vernacular solutions unfeasible. Given these premises, how can we contribute to the cultural diversity, while achieving sustainability? New master plan for Umm al-Qura University is an attempt to reconcile academic environment with nature.

Umm al-Qura University, meaning “mother of all places”, is the oldest known madrassa in Makkah; an Islamic institute of higher education. With the global growth of the Muslim population, the university prepares to become the world’s leading Islamic institution. The project required an expansion to the existing university facilities, as well as the master planning of the 2nd Academic Campus as an extension, doubling current student population in two phases. From the inception of the project, one the problem statement shared by the designers was lack of academic culture in the existing campus. Resolving such problem was especially difficult today, when all types of information can be accessed on network. Therefore significance of academic campus is to provide cultural context in which students can teach and learn collaboratively in an active learning environment. Given such objectives and informed by the campus planning experience gained domestically in Japan, the architects have found an appropriate model in the urban form and the planning organization of a souk. Souk is a mercantile typology comprised of small shops and vendors in an arcade mall. Souk in Islamic cities became integral part of its urban form, forming a network of mercantile functions, connecting major cultural and religious destinations within a city. Such intense place of exchange of goods and information was deemed as ideal spatial typology for the new campus, where display of ideas and intellectual interactions of scholars could become hybridized with students’ daily academic routines. Across macro to micro scales, the project features planning and building design concepts inspired by the local traditions, which are woven together with the contemporary building technologies. Passive cooling technologies in shading and ventilation found in the vernacular traditions were reintegrated, and became architectural vocabulary of the new campus. Spatial planning and organizational principles of vernacular architecture and urban forms found in the region were analyzed and then deployed as design tools to reinforce the academic culture of the university. Thus, the identity of the project was derived from the natural and cultural context of Makkah and the region.

According to the theory of the “primitive hut”, cultural diversity had emerged from the relationship between human and nature. The “soul” of a place, similar to the Greek concept of topos, or the Roman genius loci, is derived from given natural conditions, reflected in diverse lifestyles and cultures (e.g. Dovey 2010; McHarg 1995; Replih 1976). Umm al-Qura University is an attempt at reconciling academic campus with nature by excavating and learning from the past traditions. Cultivating culture from nature is a set of lens and tools to learn from the past, and is relevant for reimagining our future cities.
KF03-3

What's Next

MAAS, Winy
Architect, Co-Founding Director, MVRDV, Netherlands

KF03-4

Connecting Culture and Nature

JEONG, Young Kyoon
Architect, CEO, Heerim Architects & Planners, Republic of Korea

Architecture and urban scenery that we face nowadays are imprinted as a cultural identity of the country. Having lived in contemporary age and isolated from nature, we should look back at a salutary lesson learned from traditional architecture that has been optimized for the climatic environment by engaging nature back into cities and architecture to open a sustainable era. We dream that the design identity and spatial experiences, which architectural buildings should have, naturally lead to energy saving environment-friendly designs.

Korean culture and nature were embodied in the Incheon International Airport Passenger Terminal 2, which is the gateway to the Republic of Korea. Korean landscape, Cheoma (traditional eaves) of Hanok (Korean traditional house) and the space in between buildings were expressed in the interior and exterior spaces. Korean traditional design elements such as ceiling that filters natural light and patterned Korean traditional window frames were used to express an atmosphere of Korean traditional architecture.

Embassy of the Republic of Korea built in Ulaanbaatar, Mongolia has embodied the characteristics of yurt, which is local folk architecture, through curvature of Korean ceramics. As Ulaanbaatar is a region of extreme cold, the covered façade area was minimized like yurt, where light and wind pass through the atrium to meet both energy saving and comfortability of indoor space at the same time. The façade design that represented Korean identity through the hexagonal pattern of Korean traditional window has become an iconic symbol in Ulaanbaatar.

Design proposal for National Museum Complex Master Plan of Administrative Sejong City strived to embody the landscape of Korean traditional village and architectural spaces by implementing them into contemporary architecture. The effect of microclimate control, a networking between pedestrian by the fence and nature, shadow effect based on cheoma (traditional eaves) are the main architectural design elements which were used to compose Korean traditional village. Through such project references, I would like to share that cultural values and respect for nature are the core elements for environment-friendly design for architects.
The military settlements of Liaodong Zhen were important parts of the Great Wall military defense system in Ming Dynasty. The military environment is very complex. Much of the existing research about the layout focused on geography, political, military and other aspects. And it's a lack of the analysis of the military settlements layout from the perspective of military geography. So this paper analyzes the influence on the military strategy, offensive line and the layout of defense line, focus on the the geographical features of inside and outside the Great Wall. Then to do research of military settlements layout and site selection of Liaodong Zhen, and to reveal the character of the military geography feature of the defense system in Liaodong.

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Accidental Marriage: Chinese Roofings on Western Frames of Early Colonial Architectures of Hong Kong

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Keywords: Chinese Roofings, Western Frames, Hong Kong, Leakage and Deformation, Conservation Techniques

Historic Western buildings in Hong Kong are mostly roofed by traditional Chinese regional pan-and-roll tiling. Similar common leakage and deformation defects include ineffective Chinese battens needed to behave like Western rafters, inadequate Western gallow gutters to cater for local torrential rains, difficult geometry of Chinese tiles at angle valleys, and slippage risk of unsecured Chinese tiles on a steep Western pitch, all implying a thorough understanding of its original design and construction is required prior to devising suitable repairs. This paper argues that, this type of humble yet unique roof construction, illustrates a unique story of how colonial architects and Chinese builders co-created this accidental cross-cultural construction technique in early 20th century, worthy of our study and diligent conservation.

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O-0695

The Sacred Place of Seoul: Several Semiotic Reflections on Spatial Modeling of Jongmyo Shrine

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Keywords: Jongmyo Shrine, Semiotics, locus, Eternity, Isotopie

This study is about the semiotic phenomenological exploration of space. Under the prerequisite that space refers to something other than itself, it can become the target of analysis by semiotics which studies signification. Buildings can be described through semiotics of space which aims for 'the skills, production, and interpretation of space language' conceived by Greimas. By examining the style of 'making place' which possesses the meaning from the perspective of manufacturer and the experience on the aspect of user, place can be understood. Jongmyo -the subject of analysis -has been made through the semiotic phenomenological activity which has thoroughly reflected the ideology of the Confucian society. The Jongmyo Shrine - the sacred site that applies as a powerful medium - realizes placeness with a specific body. The key of the Jongmyo space is about how the eternal nature of the dynasty was reflected in space and this study aims to look at in which external composition form the symbolic meaning of the shrine is being revealed. That is, the meaning of space applied as a medium can be clarified by figuring out which architectural metaphor device the symbolic meaning is strengthened at space composition.

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O-0048

Maa - the City - a Living Being

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Keywords: Maternal Inheritance, Intangible Heritage, Housing, Interventions, Policy

The intent of the paper is to highlight the intangible qualities of a city that transcends its physical realm and are rooted in its rich tradition. 'This could also be considered the collective subconscious and memory of the city' (Mirza, 2017). This study seeks to underline factors, which both positively and negatively influence the development and growth of a city; factors that lead to a successful coexistence of its inhabitants in conformity with the soul of the locale. Two cities – Lahore and Vancouver, referenced in this paper have a distinctive imprint on their inhabitants. However both cities vary greatly in terms of their respective geography and GDP. The method of research implemented here is based on my observation and supplemented with written material pertaining to certain factors under exploration. The paper is an experiential analysis of the city as a visitor and its inhabitants. A city can thrive if the core values pertaining to tangible and intangible heritage are kept at the forefront of policymaking. In view of ever changing circumstances, policies need to be reviewed and updated on a regular basis. The implementation of this can facilitate the process of planning positively. These measures can enable continuity and sustainability towards a positive transformation of a city.

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O-0595

Feeling at Home in Starbucks: Revealing Transient Urban Interior

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Keywords: Urban Interior, Domesticity, Starbucks, Setting, Non-place

This paper argues that by looking through the ephemeral and transient interiors, represented by the non-places, we could reveal the domestic life in the city. Such interiors, which is lack of social construct and historical background, have never been considered as the reflection of urban domestic life. This argument is based on the shifting idea of the domestic interior which is extended beyond its association with the life inside the house and expanded into the urban realm of the city. Domestic is now referring to a set of felt emotions ‘at home’; it suggests the feelings of familiarity and intimacy in space that are important for the development of individual and collective identities, which is essential to cope with the harsh urban life. This study takes on Starbucks as a case study of the global non-place interior, to discover how they act as the new form of the domestic hub in the urban realm. While Starbucks usually face criticism regarding its gentrification on its interior setting, we argue that Starbucks and other similar non-place interiors would not only reflect the glimpse of urban life but also act as a frontier that bridge the realms of the familiar and the unfamiliar in the city. This study explored several interior settings of Starbucks that have different characteristics, contexts and cultures to discover their roles as the transient urban domestic interior by looking through the connection between its system of setting and its system of activities. The finding of this study suggests that the transient urban interior has crucial contributions in enhancing the citizens’ wellbeing.

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O-0297

Critically considering African Urbanism’s treatment of Communal and Public Space, Drawing on a Case Study of Swazi Traditional Architecture, its Related Rituals and Symbolisms.

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Keywords: Communal & Public Space, African Vernacular Architecture, Sense of place, Swazi Ritual and Symbolisms

There are a lack of communal and public spaces or ‘souls’ within African Cities and their informal settlements. Most of these informal settlements are based on vernacular architectural typologies (Steyn, 2007) that are designed to promote communal spaces. How can the lessons learnt from communal and ritual public space in Swaziland and other African vernacular architecture be used as an opportunity to reimagine African urbanism? The intention if the study critically considers how the values of public and communal space making in African vernacular architecture can also be utilized to reimagine informal settlements, as well as new public and communal spaces that can encourage community engagement. Other principles in vernacular architecture such as temporality (its value in celebrating rituals and cultural ceremonies), symbolism, communal building alongside the ideas of communal and public space making ultimately suggests ways to reduce social fragmentation by creating a ‘sense of place’, ownership and community pride within African cities.

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O-0036

Reinterpretation of Traditional Craft Practices in Contemporary Architecture

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Keywords: Contemporary Architecture, Craftwork, Digital Technology, Polish Expo Pavilion, Nottingham Contemporary

This study discusses how contemporary architects re-interpret traditional craft practices such as ironwork, woodwork, stonework, knitting, lacework, and paper craft in their building designs in accordance with cultural aspects. It argues that digital technology contributes to contemporary architecture by being a tool for restoring traditions of craftwork and an innovative medium for rendering images and presenting architecture. Through the virtuous use of CAD (computer-aided design) and CAM (computer-aided manufacturing), contemporary architects approach facade as a design instrument with a controversial manoeuvre. Their achievement of digital mastery consists of reinvention; yet it also indicates imitation. They use digital technology as a medium with the intention to attract public attention and encourage image consumption. Yet, they also use technology as a tool to shift the place of conventional craft from material practice to pure image. Simulating craftwork or reinterpreting traditional handicrafts in building-scale locates history within contemporary urban context. It creates a sense of tradition and a touch of history. By reviving traditional craftwork as a current interest, the architects seem eager to seek the soul of cities.

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O-0496


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Keywords: Anthropology, Drawing, Notation, Marketplace, Seoul

Namdaemun market in central Seoul is a general market selling a wide range of everyday goods in a variety of ways, demonstrating a full range from the most informal vendors through to a small number of chain store outlets. This range encompasses a form of socially produced architecture where market stalls are simultaneously in competition and cooperation with one another, all the while adapting and refining the fabric of the market as an iterative design process.

This represents an ideal example for an architecture which fully recognises the value of anthropological theories and approaches: but with direct reference to the needs of architecture as a discipline. This paper presents Namdaemun Market as a precedent for socially produced, cooperative architecture. This approach is informed by anthropologists including Gell (1998), Ingold (2013), Bestor (2004), and Gunn (2013); as well as the work of other theorists in including James Gibson (1986), and posits a retroactive manifesto for Namdaemun Market in the manner of Rem Koolhaas’ famous formulation for Manhattan (1994).

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The Preservation of Post-WWII European Neighbourhoods

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Keywords: Europe; Post-war Reconstruction, Housing Estates, European Welfare State, Preservation

Post-war housing estates remains one of the most significant products of modernity representing efforts to develop architecture as a vehicle for a better society.

In Europe, more than 41 million people still live in these sites. Currently endangered by its social, functional and technical obsolescence, many of these housing estates remain the main focus of problematic urban areas, housing low-income households, unemployed people and those from ethnic minorities, infrastructurally and socially disconnected from the city. At a time when the socio-cultural reconstruction of Europe is on the agenda, and when l’habitat pour le plus grand nombre seems to be in danger (due to issues such as the refugee question), looking back to the housing estates built during the post-war reconstruction, within the framework of the welfare state, is a fundamental step for an integrated discussion on the sustainable development of European cities of the 21st century.

This paper present successful preservation strategies undertaken in three European post-war case studies. The aim is to demonstrate how there habilitation of these structures, while addressing the demands of the contemporary needs, can represent a tremendous potential achievement, in an overall context of economic, social and environmental sustainability.

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Monday, 4th September, 2017

PS1-31: CULTURE _ architectural planning & design 1
15:00-16:15 / 310 (3F)

From Jiading and Qingpu Districts to the West Bund in Shanghai
- the Urban Breakthrough of Chinese Contemporary Experimental Architecture

LIU, Jinrui1; FENG, Qiong2; GUO, Lan3

1gmp. International GmbH, China
2CAUPD, China
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Keywords: Experimental Architecture, Rapid Urbanization, Urban Breakout, Architectural Events, the Soul of the City

Since the twenty-first century, there have been a series of contemporary experimental architectures in Shanghai’s Qingpu and Jiading Districts. Most of them are far away from the center of the city and in small size to avoid the main contradiction in the urbanization in China and explore the architects’ experimental dreams in a tactful way. After more than ten years of development, this group of architects came back to the city with the practice experience in Qingpu and Jiading Districts to start some practices facing urban context in the West Bond.

The article studies the phenomenon of urban breakout of Chinese contemporary experimental architectures from Qingpu, Jiading Districts to the West Bund of Shanghai and analysis its origin
mechanism and development process, discussing the influence of the urban breakthrough on the experimental architects' design concept and operation mode with the clue of the changes in typical architects' practices in these three places and thinks about the issue of how the contemporary experimental architectures have a better respond to urban problems.

The article believes that, with the impact of China's land ownership and administrative system, the vanguard of Chinese contemporary experimental architecture is not reflected in the concept and technology, but more in the tough fight for the existing urban context. On the one hand, in the practices in Qingpu and Jiading Districts, architects try to translate the traditional Jiangnan gardens to cope with the lack of the global context in the rapid urbanization background; on the other hand, in the practices in the West Bond, the architects began to respond to the context of the contemporary metropolis and their design methods were more and more mature. In this series of practices, the experimental architects gradually became mature in the circuitous confrontation. And the blending of Jiangnan culture and metropolitan culture also just responds to the Shanghai regional culture motif.

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O-0181

Reincarnation of the Soul of Huangyuan
- Change a City Starting from a Public Toilet, a Case Study

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Keywords: Soul, Culture, Tradition, Modern, Urbanization

In the thin air of high plateau in west China, on the traditional boundary of Han culture with Tibetan, lays a quiet town of Huangyuan (Fig.1.), a national listed poverty-stricken county, where the story of fighting for prosperity and for proud of culture identity started ten years ago. We cannot see the soul of Huangyuan, but we feel it, under the dust covered buildings, among whispering trees in chilly north wind. The program starts with a small project of public toilet, and followed by re-programming and re-designing the Huangyuan Administrative Complex, which creates an "extra" lovely civic plaza and an ecological park for the locals. As a long-term and broad-interest program, urban planning, urban renewal and landscape design were carried out in a parallel way with relevant gentle pace. This full-spectrum design practice provides great chance to learn from and treat back the city as a complex life with respectable soul. Culture demands a humble mind listening to the call of the soul, and transforming it to the body of modern life, in a way like reincarnation.

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O-0412

The Influence of Tall Buildings to the Modern Urban Landscape of Jakarta City

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Keywords: Tall buildings, Urban Landscape, Urban Identity, Golden Triangle, Jakarta

Like other Asian major cities, tall buildings became the dominant physical factor in Jakarta. Not only the CBD that features a cluster of a commercial and residential tower, but also entire neighborhoods of the city have been transformed into districts of tall buildings. According to the tall building year review by CTBUH, Jakarta had the highest 200-meter-plus completions of any city in the world in 2015 with seven. This indicates that Indonesia is aiming to gain an international recognition through building development. Tall buildings have a major role in the urban form and city skyline. With their own personalities and characteristics based on function and location, tall buildings provided a new expression to the
indigenous cityscape of Jakarta. This paper attempts to study the influence of tall buildings to the modern urban landscape. With a qualitative method in a case study of golden triangle area in Jakarta city, the paper briefly documents the morphologic development of tall buildings in Jakarta. The structured placement of tall buildings and public outdoor space element significantly provided opportunities to strengthen the Jakarta city's image and influence the urban landscape.

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O-0142

**Architectural Potentials for Uncovering the “Soul” of Antalya (Turkey) through Design Competitions: an Aesthetic Analysis of the Urban Environment**

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**Keywords:** Aesthetics, Environment, Competition, Design, Urban Layer, Antalya

The objective of this study is to discuss the architectural potentials of design competitions in uncovering the concealed “soul” of the southwestern Turkish city of Antalya. Since the 1980s, the multi-layered historical heritage of the Mediterranean city has been subject to a rapid process of urbanization motivated by tourism. The serious degeneration of social, natural and spatial characteristics led to an urban debris concealing the historical “soul” of the city. However, recent architectural design competitions organized jointly by the local chamber of architects and municipalities offered spatial potentials for uncovering this “soul”. Ranging from museum projects for the former municipal center and recently discovered necropolis to the urban design of a coastal strip, these competitions provided potentials for deciphering the lost meaning in the urban layers of the city. The competitions have been opportunities for reconstructing the citizen’s “aesthetic” relations and reviving the sense of belonging through daily life connections with the historical layers. In this study, “aesthetics” is taken in its original meaning as complete sensory engagement with environment and “aesthetic analysis” of the urban environment is selected as the method. As a result of this analysis, further proposals are developed for the process of “uncovering” the urban “soul”.

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O-0657

**A Study on the Method of Pattern Extracting by Means of Kinetic Layering System**

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**Keywords:** Pattern, Layering, Kinetic

Unlike eidetic images, regular and repetitive pattern designs are used in all places around our daily lives by implying and delivering messages. The work of creating such designs is something that requires multiple rounds of testing. Therefore, there is a need to build a methodology that extract patterns and study the methodology that tests patterns through simple modifications. This study utilized a method called the Kinetic Layering System to form a methodology for pattern extraction. A total of five different variables were applied to the system and a process for applying these variables was configured to build individual systems according to this process. Multiple variables were adjusted to derive upon a pattern. This study researches and proposes a methodology for deriving patterns that differ according to modules and movements by analyzing the Kinetic Layering System, and reviews the feasibility of utilizing the proposed method by applying specific modules and deriving several geometrical patterns.

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PS1-41: CULTURE _ urban theory & design 1  
15:00-16:15 / 311 (3F)

O-0480

Visualize and Inherit Of the Large Site Which Located in the Urban Built-up Area——Research On Conservation and Exhibition Of Tang Chang’an City Wall Site

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Keywords: Tang Chang’an City Wall Site, Large Site, Conservation and Exhibition, Urban Built-Up Area

Large site which contains abundant historical and cultural information is the most important part of the human civilization. And it is the scarcity limited and not renewable resource. In today’s China, because of the rapid development of economy, the city expanded rapidly, the large site which located in the urban built-up area encountered an unprecedented crisis. And city also inevitably face the danger that loss of the historical characteristics. In this article, the conservation and exhibition of Tang Chang'an city wall site is taken as an example to discuss the issue of protection of the large sites harmonious coexistence with the urban construction, and the strategy of “Individually Conservation” and “Systematic Exhibition”.

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O-0467

Ethnography of Space: A Dynamic Approach towards the Interpretation of Historic Heritages, with Djemaa el-Fna Square as a Case Study

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Keywords: Ethnography of Space, Djemaa el-Fna, Historic Heritage, Contested Space

Nowadays, it is a huge challenge for architects and planners to preserve urban historic heritages without losing its “soul”. With the case study of Djemaa el-Fna Square in Marrakesh, the distillation of exotic Orientalism and the construction of an “authentic” experience of Morocco (Minca et al 2016), the article develops an architectural-anthropological approach to not only reveal the “soul” of space, but also remind us of the contested realities that have put the “soul” in danger. The ethnography of space starts by projecting the phenomenological experience of “being-in-the-world” (Heidegger 1962) into the objectifiable construction of “being-in-the-square”, bringing forward the spatial dynamics of Djemaa el-Fna between its tangible and intangible configuration. Furthermore, by exploring the struggle between the set spectacle and the neglected quotidain, the article reveals the “stage” structure of space constructed by the on-lookers and the desired “other”, showing the contested struggle between tourists and local actors within the postcolonial context.

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O-0306

De-bordering and Re-bordering: A Historical Study of the Urbanization Process in the Great Wall Area of China, 1644-1911

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Keywords: Urbanization, Spatio-Temporal Analysis, the Great Wall, GIS, Qing Dynasty

The Great Wall area represents the largest area of land-use and land-cover change in China in the past 300 years, when the borders of agricultural production and settlement continued to move northward, forming the pattern of settlements we see today. In this article, Spatio-temporal evolution of settlement are analyzed through GIS applications. The results show that immigration policy, transportation routes, restrictive order, port trade significantly influenced the placement and the form of settlements. Economic factors have gradually become the dominant affecting the development, taking the place of defense concerns. During the Qing Dynasty (A.D.1644-1911), urban development is not a linear process. From the view of time, four phases can be identified: prohibition, initial growth, plateau and high speed. From the view of space, the distribution exhibits a statistical fractal feature, and the urban spatial structure has gone through three stages: random stage, incubation stage and development stage, conforming to the theory and model of “Pole-Axis System”. In the course of history, urban development and restrictions are simultaneous in the Great Wall area, but demilitarization and economic development of the border region are the general trend of times.

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O-0482

The Mechanism of a Bittersweet Mille-feuille:
Toward a New Recognition of Seoul City Wall:

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Keywords: Hanyangdoseong, Seoul City Wall, Mille-Feuille

Surrounded by four inner and outer mountains, Seoul city has a unique spatial structure that maximizes the natural topography of the Korean Peninsula. The main objective of this paper is to propose a mechanism demonstrating that the soul of the city can be condensed into multiple layers similar to a Mille-feuille based on diachronic analysis. This is elucidated in case study of Hanyangdoseong (“Seoul City Wall” or “the Wall”). Imbued with bittersweet ingredients from its historical background, the Wall not only illustrates construction developments, but also displays that architecture is inextricably interwoven with the sentiments of the people and the soul of Seoul city.

I highlight that the essences epitomized in palimpsestic layers of Hanyangdoseong as a metaphor for Mille-feuille can be summarized into the phases of 6Cs: (1) Cornerstone, (2) Convention, (3) Challenges, (4) Conservation, (5) Cure, and (6) Connection. Consequently, I present policy recommendations for the management of Hanyangdoseong named “UIA”, as a process of (1) Understanding, (2) Interpretation, and (3) Application. I emphasize that various stakeholders have created a socio-political milieu by reinterpreting beyond the spatial-analytic approach. Thus, this paper will contribute theoretically and practically toward a new recognition of architecture and “Soul of the City.”

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For a temporal choreography of modern urbanism: Some semio-poetic reflections on the project of restoration of Walled City in Seoul

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Keywords: Seoul, Urban Semiotics, Urban Morphology, Temporality, Modernization

For a temporal choreography of modern urbanism: Some semio-poetic reflections on the project of restoration of Walled City in Seoul. Through a case study of the project of restoration of Walled City in Seoul, I will attempt to show how the architecture and the architectural and urban project might be temporalized materials. This study is based upon the following hypothesis: living in a place presupposes a relational experience. In this respect, a place might be defined as a medium of the experience of living. The moment of the project of restoration of walled city of Seoul represents this singular and crucial moment where the complex and subtle relationships between the past, the present and the future are reinterpreted, reconfigured, resemiotized. In this perspective, the project could reveal a regime of historicity, temporality, or temporal polyphony where the habited world is inscribed. In sum, the living is a spatial and temporal experience. In this paper I want to demonstrate how the present could be deployed in the project of walled city. An architecture is situated not only among the things of the world and human being, but also among the different times of the things of the world and different times of peoples. An architecture has a potentiality of affecting the World and the Man as a powerful medium and coordinate whose temporal referents could create a new meaning of for the living. I would like to call this perspective a temporal choreography and poetics of a (post)modern city. which could open new temporal horizons of the project of walled city.

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15:00-16:15 / 314 (3F)

“Gwangju Folly,” The Cultural Landscape in Gwangju: Strategy and Concepts of “Gwangju Folly” as a Cultural Intervention for Urban Revitalization

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Keywords: Gwangju Folly; Urban Revitalization; Cultural Landscape; Place Marketing

Gwangju Metropolitan City established “Folly,” a project of small decorative buildings situated randomly in Gwangju City as “urban devices for revitalization” to create a city image for Gwangju. Folly shows different progressions by phase (Folly I, II, III), and after the first Folly was installed in 2011, the second was executed in 2013, and the third is now in progress. In this study, with respect to theory, we first explore future cities according to their cultural direction through existing cases that have formed cultural landscapes through Follies. Second, by phase, we compare the characteristics of the Gwangju Follies, which function as urban devices for revitalization in the gradually declining old downtown of Gwangju.

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Metropolitan City through examining their background and current status. Third, we explain the concept of place marketing and consider five factors as indicators for evaluating Follies. Fourth, we analyze the Gwangju Follies by phase in terms of sustainability, authenticity, integrity, connectivity and efficiency, and make appropriate recommendations.

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O-0713

Hold City’s Dynamic Context
—Micro-regeneration Strategy Research on Nanjing Ming City Wall

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Keywords: Nanjing Ming City Wall, Periodic Segmental Regeneration, Wall Acupuncture, Linear-Type Dredge Regeneration, Participation and Intervention

Nanjing city wall of the Ming Dynasty is a nation-wide key cultural relics conservation unit, enclosing the rapid developing city. It has a unique identity of tortuous enclosure with a perimeter of 35.267km, now 25.091km well preserved. The building law of meander results from the distinctive mountain landscape and water flow, which makes the city as an organic life integrating the context, culture, landscape and common life. However, some parts of the city wall play the fixation line role which hinder urban development and no longer respond to various challenges of the extreme changes in climate, ecology, social justice and cognition gap, thus the principle of dynamic and periodic segmental regeneration are preferred.

According to the status situation of Nanjing city wall through the field visit around the whole perimeter, this article specifically concludes four types of preservation strategies respectively corresponding to different parts in order to answer to diverse topic statements. Nanjing city wall of the Ming dynasty has its own values from the perspectives of architecture, culture, landscape and economical development. Therefore, micro-regeneration will involve more public opinions and social intervention with the successful catalyst of paradigm. Furthermore, it has a promotion meaning to apply the strategies in other cities’ micro-urbanization with ancient walls.

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O-0564

The “Homeopathic Urban Design” Method in the Urbanization Process of Chinese Cities and its Relationship with Traditional East Asia Thoughts

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Keywords: Homeopathic Urban Design, East Asia tradition, Natural Situation, Townscape, Urban Vitality

The modernization of Chinese cities always means rationalization of the old urban space. In this process, some of the traditional characteristics, regarded as lack of infrastructure or symbols of outmoded lifestyle, has been systematically erased. Things changed with some interesting practice of recent years, for example the design work of Huang Shengyuan and Liu Jiakun. They either use the existing urban conditions, or create a new urban environment in line with the situation of Asia, thus retain the original vitality of traditional urban space. this paper defines it as “Homeopathic Urban Design” and give a detailed analysis on this new urban design concept that conforms to the original urban form, spatial logic and life style of East Asia. It also reviews the relationship between this method and the thoughts of ancient Chinese. It argues that nature is still the basic power of space generation and is considered the loftiest aesthetic ideal of East Asia. This paper attempts to inquire into this newly developed design
method through analysis on the representative design works, and try to preserve more urban identity in the process of the modernization of Chinese cities.

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O-0880
CITY GATEWAYS TO STRONG CULTURAL MESSAGES IN YOGYAKARTA, INDONESIA
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Keywords: City, Gateway, Cultural, Message, Yogyakarta

This paper is to analyze the potential cultural messages as a component of the urban design structure of Yogyakarta City Gateways in Yogyakarta, Indonesia. City gateways and arterial routes provide strong visual messages about the city character, image, and identity. However, most city gateways of Yogyakarta urban area represent commercial artifact rather than cultural messages of Yogyakarta special region. This issue does not comply with the draft of local government regulation concerning spatial territory distinctiveness. It is important to create strong visual impressions of the northern city gateway of Yogyakarta urban area by using the potential cultural character, image, and identity to contribute for Yogyakarta special region as a sense of place. Two city gates in Indonesia and one city gate in Malaysia as precedents inform that some aspects of character, image, and identity have their own messages based on their specific value and culture. The primary data (such as several elements of the western, northern, and eastern Yogyakarta city gateways) were obtained using photographs and notes. Meanwhile, the secondary data (such as case study area descriptions and profiles) were obtained using the internet and literature. The analysis used qualitative approach to support the visual description of the cultural messages on the northern Yogyakarta city gateways. The research suggests that any primary existing ring road cross over with arterial road is potential as a city gate and as a node based on the City Image concept and this approach should be supported by the local character of an integration of social and commercial facilities such as rest area, public park, retail, and culinary. As node, most city gates of Yogyakarta urban area are naturally more commercial rather than representing the existing potential heritage and cultural identity.

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O-0070
Artifact, Commerce, and Landscape: An Urban Eco-system in Seoul
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Keywords: Urbanism, landscape, Infrastructure, Morphology

The city of Seoul seems to stratify urban memory through various isolated fragmentations. To examine such behavior we find an instance in the city, which seems to unglue historical reference and continue a hyper-urban multiplicity. Firstly, Sungnyemun gate, offers an isolated moment in time after being formerly connected to the old city wall. As an artifact, the gate separates itself from on-going urban behavior as the city grows around its traditional form. Secondly, Namdaemun, the largest wholesale market in Korea dating back to the 15th century, stages an on-going economy and produces a highly dense environment. Thirdly, the new 7017 Seoul Station overpass utilizes a former highway overpass promoting through mobility, tourism, and landscape. New kinds of memory of seemingly disparate conditions demonstrate societal reflections and environmental challenges. This paper evaluates the three instances of artifact, commerce, and landscape as a way to reveal an ecosystem of conflicted contemporary urbanism.

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The Construction of Modernity in Brazil

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Keywords: Modernity, Brazilian Architecture Lúcio Costa, Design Culture

In the field of Modern architecture and urbanism, the work of Lúcio Costa constitutes an important reference to understanding the construction of modernity in Brazil. In 1930, he introduced the renovation of architectural teaching at the National School of Fine Arts in Rio de Janeiro. To Costa, modern architecture had a close relation to Luso-Brazilian architecture, though its "beauty as a result of its perfect simplicity, site relation and function". This assertion was based on his deep knowledge of vernacular architecture, due to his work at the National Institute of Historic and Artistic Heritage, between 1937 and 1972. His main projects realized in collaboration with Oscar Niemeyer, such as the Brazilian pavilion for the New York World Fair (1938) and the Education Ministry building in Rio de Janeiro (1935-1945), are examples of a progressive architecture, with world-wide recognition. From a historical perspective, this paper analyses the pioneering work of Lúcio Costa, both as a practising architect and theoretician. His influence has given birth to a design culture in Brazilian architecture, enhancing professional education and practice.

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From the Past to the Future.
The New (Old) Urban Concepts through Louis I. Kahn

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Keywords: Kahn, City, Historical, Future, Rome, Reinterpretation

Soon after the Six-Day War, the Jewish Community started to work on the reconstruction of their Quarter on the Old City. One of their first goals was to rebuild the Hurva Synagogue, an important Jewish structure destroyed two decades ago during the Arab-Israeli War. Louis Kahn, as one the most important Jewish architects in that time, was invited to propose a new synagogue, a new landmark for the Jewish Community.

This was the first time that Kahn had to face with an important historical context, and not only due to its architectural heritage but also its symbolic connotations. He never revealed the references that influenced his design for the Hurva’s Synagogue, if there were some specific ones, but his project shows some Roman influences and especially some lessons learnt during his stage at the American Academy in Rome.

For example, Kahn applied in Jerusalem some urban techniques used to shape Rome during the Baroque period, but also some gestures and forms typical from the Mediterranean Classical cities and buildings. Therefore, this paper will attempt to unfold Kahn's interpretation of some old (Classical) urban implications on the design of his new Hurva Synagogue and its surroundings.

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O-0315

Utzon and Islam: The Influence of Islamic Architecture on the Work of Jorn Utzon

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Keywords: Utzon, Islam, Architecture

Jorn Utzon was the creative genius behind the Sydney Opera House. His work throughout his career incorporated lessons from traditional cultures, and his travels allowed him to experience and draw from many traditional influences including Mesoamerica, China, Japan, and Islam. Through an investigation of his projects these influences can clearly be seen.

His architecture managed to combine organic with geometric form, a perception of nature and the discipline of industrialised component building processes, and was described in Sigfried Giedion’s Space, Time and Architecture as belonging to the third generation of 20th century architects.

In his writing Utzon talked of the unbroken “continuity between the sublime and the ordinary” he saw in both Chinese and Islamic towns and buildings. The Islamic architecture he saw in Iran, India and Morocco influenced his work throughout his career. This is most evident in the planning and forms of the Kuwaiti Assembly building, but can also be seen in his use of brickwork, the pervasive use of the courtyard as an ordering principle especially in his multi-residential housing schemes, the use of modularised building elements, and even the use of tiles such as on the Sydney Opera House.

His work neither copies nor delivers a pastiche of decorative elements but instead shows a clear understanding of the principles that were inherent in traditional Islamic architecture and a creative and inventive reinterpretation of them in buildings and elements of all scales. This paper looks at those aspects of Utzon’s work that are drawn from Islamic culture, and is illustrated with comparative examples. It examines influences from both the grand formal buildings - mosques and palaces; as well as vernacular architecture - the courtyard house, the town layout, the modular nature of cellular construction, and the sculptural expression of traditional forms such as wind towers.

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O-0308

The Contemporary Architect as Editor/Curator: Yes Is More and Hot to Cold by BIG

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Keywords: Architecture Exhibition, Monograph, Curator, Author, Bjarke Ingels Group

Positioned in-between the current practices of visual culture and narrative performances, today, exhibitions challenge the traditional functions of collecting, displaying, and educating by rethinking established notions and creating a dialogue on emergent discourses. Architecture exhibitions and their supplementary catalogues/monographs become means of personal statements and design approaches with an intention to make the public decipher and discuss architecture culture. This paper explores the Danish architectural office Bjarke Ingels Group (BIG), with a focus on their primary exhibitions and monographs, namely Yes is More: An Archicomic on Architectural Evolution in 2009 and Hot to Cold: An Odyssey of Architectural Adaptation in 2015. Challenging a diversity of media, interface, narratives, tactics, strategies, and actors, the premise of the contemporary architect as editor and curator refashions Walter Benjamin’s 1934 essay “Author as Producer” and Michel Foucault’s 1969 essay “What is an Author?”. Evaluating the current role of the architect as curator and editor, the paper uses the exhibitions and monographs as an instrument of probing the textual and visual representations of contemporary architecture.

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Memory is not Concrete: A Case Study of the Memorial to the Murdered Jews of Europe

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Keywords: Concrete, Material, Modernity, Peter Eisenman

Concrete has become the default material for memorials, and this is also the case in the project of this paper: the Memorial to the Murdered Jews of Europe in Berlin, a eleven acres of gently undulating charcoal grey concrete, made up of 2,711 concrete stelae lined up along paths that orthogonally dissect the whole site. Most of current research on the so-called Field of Stelae addresses to the features of emptiness, anonymity, and muteness so as to underscore what makes this newly erected site of Holocaust memory in the center of Berlin unique. Those works examine the political implications of memory work in and around the site, and ask in what ways and to what extent the discourse on remembering the Holocaust in Germany affects action at the memorial, and how this action, in turn, recasts old and new discursive modes about the past and present politics in contemporary Germany. This paper, however, would like to emphasize an alternative scope of this memorial through the study of its application of concrete, not simply a choice of the designers for this memorial, but a physical medium produced by specific procedure and particular technology. I would accordingly offer an analysis of the tension associated with concrete between the experience of, and action in, the Field of Stelae, its aesthetics and the discussions around it. In spite of established defenses of the design per se by journalist Hanno Rauterberg, historian Mark Godfrey, and architect Peter Eisenman himself, the project fails to bear an adequate historical relation and, hence, is an unsuccessful memorial. At the same time, nevertheless, the use of concrete at the field of stelae deserves more attention in the sense that how to be memorable—associated with special quality requirements including meticulous sitework as well as off-site production—without being a memorial; or even as Eisenman said, “I wanted it to have the quality of concrete without being concrete.” The autonomy of concrete in Berlin, as a result, betrays long-lasting assumption of a material like concrete’s historically constructed relation either to memories towards the future or to the modernity facing the past. Taken together, we see the process by which concrete was in certain circumstances, along with a specific industrial programming, made into a memory-signifying material. And what is clear at the Memorial to the Murdered Jews of Europe is that it was not even for any memory-bearing properties as such that concrete was chosen as a medium for memorial, but rather for contingent reasons: for the opportunity it gave to make seamless objects; and for its nature-suppressing qualities to have a place empty of housing, commerce, or recreation. The question of historical content begins at precisely the moment the question of memorial design ends. Memory, which has followed history, will now be followed by still further historical debate in the upcoming future. From this paper’s point of view, concrete seems to be the general answers to these questions. But memory, after all, is not concrete.

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The interpretation of constructivism as Soviet architectural modernism

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Keywords: Constructivism, Constructivist architecture, Russian Architecture, Modernism, Rationalism, Avant-Garde Architecture, Design Thinking, the Vesnin brothers, M. Y. Ginzburg, V. V. Mayakovsky, Ekaterinburg.

The paper considers constructivist architecture in Russia, and in the Urals region in particular, to be one of the phenomena of modernism as the general style of architectural thinking. Constructivism is defined as the significant authentic architectural achievement in Russia, 1925-1935, since other trends and
styles were adopted from other cultures and regions. In the process of comparative analysis Constructivism and Modernism is shown common features of them. Both were developed from the modernization of classical architecture and influenced by avant-garde painting, from positivism, and from political and societal goals in the early twentieth century. The appeal to the achievements of natural science, the use of schematic models in architectural design, the desire to conform to the realities of the new industrial era, focus on the future give rise to a common conceptual installations and unity of forms in Constructivism and Modernism. This paper reviews the programs and research works by the Russian constructivists architects. The gap between the development processes in Soviet architecture and those of the Western world in the early twentieth century is bridged by the studying creative concepts architects of Russian constructivism.

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Monday, 4th September, 2017
PS1-22: CULTURE _ architectural theory & history 4
16:30-18:00 / 305 (3F)
O-0898

Goz-Beida, Resilience City Which is Looking for a New Humanity
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Keywords: city, resilience, city, identity, humanity

GozBeida, is a village that is created to east of Chad in 1870. To site, it is plateau which is enclave of three mountains that hit his human territory and his soul. The site is situated between the “12° 13′25″ north, latitude and the “21°24′ and 53″ longitude east. The climate here is considered to be a local steppe climate.

About the potentiality, it is the rich and varied agricultural production, the majority of the population is young and women, another point is the crosswords of cosmopolite. The city is isolation from other parts of the country from a long period of the year during the period of rain. So the cross or corridor of Ouadi (amount of water) which appears periodically, provokes the erosion, and has been seen as the key destruction of the habitation and equipment.

Today Goz-Beida is preferable a palace of all problems: Environmental, Economic, Social, Heathery and Cultural, the town is characterize by an migrant population caused by the crises of Darfur, for this problems the life is in perpetual mutation that show him resilient. With all problems, Goz-Beida city resilience continues to advance the new humanity.

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O-0177

Adaptation: Seeking Opportunities in the Challenges: Lessons From UIA 2014 Durban Spatial Legacy Projects

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Keywords: public space activation, social cohesion, cultural inclusion, economic justice, environmental resilience

The paper represents a view from a South African City, from Durban’s Local Government working with a developmental agenda. Following on from the UIA 2014 Durban Congress on the theme of ‘otherwhere’, the case for alternate means of practice and the ‘Case for the Adaptive Architect’ (as outlined by Cameron Sinclair) is taking centre stage. It is becoming the dominant discourse. And as the global disenfranchised become more audible, more visible, more undeniable the real engagement from all professional sectors becomes more pressing.

At the 2016 ISOCARP (International Society of City and Regional Planners) Conference in Durban – the title was the City we have versus the City we need. We are living in an environment of FLUX. Rapid urbanisation, increasing poverty, disparities in income, global economic crisis, forced migration, climate change, environmental disasters, conflict and the emergence of a radical conservatism (patriotism). Aromar Revi from the Indian Institute of Human Settlements reminds us that therein lies a dynamic tangle of opportunities and challenges and that cities are ‘crucibles of social and cultural accretion, cultural transmission and periodically of transformation’

How do we as Architects engage in this dynamic environment. Architecture has the power of synthesis in the face of complex issues. The paper tracks the project activation during August 2014 and seeks to outline two projects which were UIA 2014 Durban Spatial Legacy Projects. The project principally aimed to create significant public space in Durban, a city spatially fragmented by Apartheid. The Dr Pixely Ka Seme Linear Park Project and the Rejuvenation of the River Town Precinct will be outlined with the aspirations, the challenges faced, the public engagements, the activations, the lessons learned and the legacy.

Imagine the impact on economic justice, social inclusivity and environmental resilience if one is developing with the developmental aims of the South African Constitution as the guideline:
- If one was looking to grow economic opportunity with the spend on public projects,
- if one was looking to grow citizen agency through participatory processes with the spend on public projects,
- if one aim to develop citizen-centric transformative capacity through the spend on public projects
- if one was ensuring climatic mitigation and adaptation with the spend on public projects

At the AZA conference at Wits University this year Joachim Declerck from ‘Architecture Workroom Brussels’ cites the role of Architects as agent ensuring the right questions are asked, interrogating the need for projects, the process of project development and speaks about Architects being the midwives of social inclusion’ and as cultural operations. Our roles are growing.
- planning in action
- that used project activation as a participatory process
- that developed learning by doing
- building on Massive Small outlined by Kelvin Campbell at the We Design SAIA KZN Conference

“To be truly radical is to make hope possible, rather than despair convincing.”
– Raymond Williams

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O-0419

Understanding and Assessing Modern Architectural Heritage: Value-Oriented Contextual Interpretation Based on Dalian (China) Case Study

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Keywords: Modern Architectural Heritage, Value, Contextual Interpretation, Dalian

Modern architectural heritage, built heritage of 19th and 20th centuries, gains interest both of international organizations and regional agencies of late years. To conserve the heritage of modern times and of the previous era are of equal importance. The different contexts and the resulting understandings of modernism form a diverse global landscape of modern architecture, as well as the significance with the derivative values of heritage today. This paper aims to explore what could the contextual interpretation contribute to the understanding and assessment of modern architectural heritage based on a case study of colonized modern Dalian (China). Firstly, it will establish a theoretical framework with knowledge of value and context to explain the logic of value-oriented contextual interpretation, as well as how to conduct the following case study. Then the paper will interpret the modern history of Dalian and the influences of architectural trends in terms of geo-culture. Finally, it will reveal the findings from the previous interpretation that the urban modernity resulted from a carefully programmed colonization and the architectural culture was an alien to the eastern roots but a continuation of western traditions, and shed light on the contributions offered by contextual interpretation.

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O-0146

Inheritance of Historical Elements and Poetic Expression of Contemporary Architecture

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Keywords: Historical Elements, Inheritance, Contemporary Architecture, Poetic Expression

Historical elements are loaded with the essence of human civilization. The magnificent and ever-lasting charm is passed down via contemporary architecture, which immerses people in this long path simultaneously. With the diversification of contemporary architecture, large quantities of architecture works have left us with profound impressions and beautiful memories as they successfully inherit the unique historical elements. This paper states the inheritance of historical elements by comparison of multiple cases, analyzes its silent transforming influence over architectural design, and explores constructs for the poetic expression of contemporary architecture.

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O-0087

Cultural Transfer and Architecture:
Foreign Architectural Practice in Shanghai after 1949

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Keywords: Cultural Transfer, Foreign Architect, Architectural Identity, Adaptability, Shanghai

The modernization process of Chinese architecture belongs to the mode of late onset extroversion, which coexists the western centralization tendency and the local marginalization. Shanghai's special geopolitical environment represents the collision, conflict, digestion and fusion of foreign architectural culture. Therefore, the study from perspective of foreign architect has great practical and theoretical value. The subject based on the relevant architects, patting the pedigree research method, aiming the role of multicultural background and discourse in cross-cultural practice, researches on the pedigree relationship and the adaptation strategies of foreign architects in Shanghai after 1949. (1) Based on the composition of foreign architects, investigating documents and historical materials to form qualitative and quantitative data, studies the transformation on foreign architects and their characteristics. (2) Based on the mobility and distribution of foreign architects, summarizing the clustering pedigree relationship, reveals the transculturation of the context, process, architectural thought and concept. (3) Based on the cultural adaptation paradigm of architects in cross-cultural practice, explores cultural-driven effect that the paradigm shift of practical strategies influence built heritage and historical environment. The subject further enriches the architectural history of architects as a clue, and further expands the vision of Chinese architecture from cultural study.

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O-0357

Blurring Line Between the Vernacular and the Modern:
Do-It-Yourself(DIY) Housing Scene in South Korea

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Keywords: DIY, Vernacular, South Korea, Housing, Information Age

With the cultural phenomenon of returning to rural life (guinong/guichon) in the new millennium, some South Koreans started to seek residential options that reflect personal tastes and particularized lifestyles. With the development of digital technologies and widening access to computer programming tools, some technology-savvy South Koreans have started to design and construct their own homes. This paper analyzes cases of DIY homes in South Korea to reflect upon the role of architects in the current era of the information society. What are implications of such phenomenon for future architects? What are opportunities and obstacles relate to the experiences of DIY builders in South Korea? Can there be a bridge between DIY builders and work-deprived architects in the slow-growing South Korean economy punctuated with recessions? Contrary to the commonly held notion, this paper concludes that the role of architect may not diminish even in the context of rising DIY homes. Rather, DIY phenomenon presents a new opportunity for architects to play a different role in promoting community empowerment.

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The Soul of Blackburn: Industrial Memory and Urban Landmark

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Keywords: Blackburn, Textile town Revitalization, Industrial Memory, Urban Landmark, Public Space

Blackburn was a former mill town, textiles have been produced in Blackburn since the middle of the 13th century. Blackburn was a boom-town of the Industrial Revolution, and among the first industrialized towns in the world. With the development of industry, the skyline appeared many chimneys, some of them were already be the landmarks of the town. Industry also changed the life style for local people, more and more products promoted the business and the local assembly. People used to get events in some open area around the landmark. With time past, now the Textile is regarded as Sunset Industry and factories are closed, chimneys destroyed. The tallest building in Blackburn should be the council office, which is 60 meters high. It is located in the city centre but public activities used little. The key of the old industry city revitalization is the passion of the public activities. The soul of the city is the local public memory. With the methodologies of History searching, Field trip and Local interview of the investigation of Blackburn, the symbol from the time period of textile boom-town should be dug. There are all kinds of tools used for cottonocracy. One of the representation is Shuttle. The strip-type shape could be also come up with the former landmark, which was chimney. After much case study and Local research, a green space surrounded by dwellings is the design site. The green area forms part of the vision of the city, not only the residential area but also many other city elements, for instance, railway station and Liverpool Canal, influence the city architectural practice. The result is to highlight the soul of Blackburn City as the public memory of time period and citizen habits. A new public landmark space helps to rethink the influence of the soul of the city in town recitalization.

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A Study on the Characteristic of Guest Hall in Villages around City - a Case Study of Shenjianong Village in Hangzhou City, China -

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Keywords: Villages around City, Chengjiaocun, Guest Hall, Keting, Universal Space, Sustainability, Lifestyle, Extension, Renovation, Urban Development, Redevelopment, Modernization, Reform and Opening Policy

As known as suburban village, modern farmers’ villages surrounding cities in China are directly influenced by the modernization of the urban district. This is brings a tremendous change to people’s lifestyle, but they also respond flexibly by the repeated works to extension and renovation of their own
dwelling. However, with being absorbed by the expanding of the urban district eventually, it forms up a brand new urban space.

The observation is related to the singularity of villages around city where have the vanishing of extreme space and taken the refresh, although they are adapting to the change.

There is a noticeable thing that every dwelling has its own “Guest hall”. It is a sort of “Universal Space” and a kind of room that easily accepting the change of their lifestyle.

By the analyzing the method and usage of the residence plans based on the center of “Guest hall”, arranging the unique relationship of suburban villages and urban development, we can find out the key of researching the planning method of sustainable development for farmers’ villages.

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O-0332
Possibilities of Sustainable Social Housing in Lagos Nigeria; a Case study of the design, Specification and Adaptability of the new Lagos Homs Housing Scheme
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Keywords: Design, Specification, Adaptability, Sustainability, Housing

Housing is recognized by the United Nation as a human right, yet Nigeria’s low-income households in particular struggle when it comes to adequate shelter. The urban population in the country has increased from 10% in 1952 to 47.8% in 2015 with a housing deficiency of about 14 million units. Most of the housing schemes delivered in Nigeria to date target the high-end luxury market segment and, to some extent, the middle class that has emerged over recent years and may increase due to the economic growth and continuous industrialization. Housing scheme provided by government has not been termed sustainable over the years and therefore it has created maintenance problems to both the occupants and the managers. This research investigated the design, specification and the adaptability for continuous change of the new Lagos Homs Scheme which has been put in Place by the government to solve the housing lag in the State. The paper concludes that sustainability and adaptability is possible if the designs can be adjusted to the conclusions made in this paper. This will allow for new emerging building material and component market and will enable the Government to improve on its policy on housing sustainability in Lagos.

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O-0310
Sources of Nigerian Architecture in the 21st Century
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Keywords: National Identity, Vernacular Architecture, Form, Space, Culture

Nigeria, the home of the largest conglomeration of blacks in the World, deserves its unique architectural identity. Its variety of vernacular built environment seems to hold promise to that ambition. Vernacular architecture across Nigeria’s geographical clusters have demonstrated a thorough response to the climate, local technology and socio-economic parameters in which they developed. The advent of colonialism, the spread of Islam in Africa, and the end of slave trade, impacted tremendously on the options available to developers and master builders over the years. This review paper identifies the prospective sources of evolving the country’s unique spatial identity and architectural language by critically exploring the determinant and moderating factors of the development of ethno-regional built
environment for the country. The life style and the divergent historical circumstances of the nation’s core subdivisions readily suggest the devolution regional identities. The paper argues that a national identity could be forged through a five-tier synthesis of architectural strategies, to positively integrate form, space, and order imaginatively to fit user ‘genius loci’, i.e. sense of rootedness. The application of the courtyard within the family compound (groups of dwelling units sharing common services), serves physical, social, and economic functions concurrently. Hence, the essence of traditional style has to be cherished dearly, to ensure cultural heritage conservation of the society. It could be concluded that despite the gradual replacement of traditional building practices with modern trends; core cultural values like hierarchic selective interaction (privacy) afforded by the courtyard housing system, seem to be retained as consistent features Nigeria’s build environment, which must be jealously guarded.

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O-0094

Spontaneous Stages: The Contemporary Lightweight Collective

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Keywords: Piñero, Deployable, Lightweight, Ephemeral, Collective

From the mechanics of parts in the work of Spanish architect Emilio Pérez-Piñero, to the material sciences and technological processes of Buckminster Fuller, the paper uncovers an emerging use in a period of “post-economic-recession” to produce ephemeral, lightweight and collapsible architectures in the public realm. Today, the necessary versatility of the limited common space in our cities and our transient lifestyle establish a contemporary framework to reevaluate the work of these architects on the deployability of architecture. Recent proposals from Spanish architects such as ‘Eco-boulevard’ by Ecosistemas Urbanos, ‘Escarabox’ by Andres Jaque and ‘La Carpa’ by Santiago Cirujeda prioritize a performative, sustainable, social and political role advocating for impermanence and flexibility outdoors. These spontaneous stages share a common ability of adaptation, integration, configurability of uses and form malleability in the urban context by responding to a greater and more complex environment and a more diverse socio-political reality. A paradigmatic shift in the role of architecture from heavy and permanent infrastructure to light and temporal scenarios based on the ever-changing demands on the built environment.

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O-0382

A Critical View on Design of Urban Buildings
: Balıkesir Municipality Design Competition /Turkey

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Keywords: Architectural Competition, Urban Buildings, Municipality Building Design, Balıkesir

Balıkesir Municipality Building Project, which received the 2nd prize in a National Architectural Design Competition in September, 2016; was developed through two primary inquiry areas. First inquiry is the relationship of place/building, second is the questioning of the relations determining the building quality
such as mass, space and architectural program. It was questioned how the contents of a city or place could be defined, what are the characteristics that make them available. It is possible to say that a building that adds value to the city can become an inseparable part of the city. When it is examined from the architectural and urban relations, they touch the city's culture, history, daily life or anticipations of the future. The architect was able to specify and quantify both the poetic and technological qualities of space in spite of all structural and urban aspects. In this case it may be what the design idea of a private / unique building means and what it contains, in terms of questioning, location and building relations that need to be done for related areas of design thinking.

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PS1-42: CULTURE _ urban theory & design 3
16:30-18:00 / 311 (3F)

O-0405
The New Readings of the Urban Patrimonial Spaces as a Result of the Replacement of Urban Users and the Conceal of the Authentic Structures and Its Associated Intangible Heritage
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Keywords: Space Reading, Urban Imaginary, Patrimonial Spaces

Some of the most relevant spatial readings in a city with historical heritage are linked to the social traditions and to the persistence of memories or activities performed in them by the traditional inhabitants. Although, numerous interpretations deviate from the original architectural and urban spatial discourse, whose conditionings comes from expectations generated abroad.

In cities with a large floating population or an important immigration we detect two types of pernicious readings. The former one dilutes the historical importance of the built milieu, creating its experience superficially. The latter comes from the purpose to attract large masses of users, destined for consumption. These types of users do not require to do any understanding effort at the site, since they don’t try to appreciate it, having indistinct expectations in every space they visit. These transitory occupants in cities may force it to adjust it to a standardized image, oblivious to the spirit of the city, at the risk of losing the market. Thus, cities are victims of this market and because of this propaganda the most authentic manifestations are displaced or despised and urban residents are excluded and replaced at the same time, while authentic structures and its intangible heritage are concealed.

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Designing Heritage Urbanism: Developing a Form-based Code for Two Different Heritage Streets of Old Dhaka City and Compare Them

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Keywords: Heritage Street, Urban, Sustainable Development, Form-Based Code, Built Culture

Heritage and culture is the main core of a nation’s identity. For a sustainable development in a heritage site, one needs a holistic and very sensitive approach. Current debates about urban sustainability tend to focus on technical issues, such as carbon emissions, energy consumption and waste management, green building or on the economic aspects of urban regeneration and development. Heritage is seen as a major component of quality of life, but the two main methods of identifying and protecting urban heritage—the listing of individual monuments and buildings and designation of conservation areas—are unable to deal with less tangible features of townscape, such as street patterns, road side building architecture, reuse of cultural building and future development in an urban heritage area. Yet it is often precisely these features that give a city its unique character and provide the sense of belonging that lies at the core of cultural identity. The aim of research is to affirm heritage as an active space and spatial resource, to include it in future life and to allow it to be the initiator and active participant in sustainable spatial, social and cultural, economic and touristic development. The case study is not a single building, rather it's a street of two very different culture, one has architecture heritage of French, British and Muslim reign and another is embedded with the century old Hindu culture. The research is selected case studies of two streets of Old Dhaka as a cultural heritage. One is B. K. Das Street and another is Shakhari Bazar Street. The purpose of this paper, therefore, is to examine the role that built cultural heritage can play within sustainable urban development and to project a design guideline that can be followed for future development. Then, the paper analyses and scrutinizes the sporadic and haphazard urban development in Heritage Street. The paper concludes with a brief discussion of shortcomings of existing approaches of urban development and how by preserving the essence of the culture, a healthy and sustainable future development can be done. Lastly, a form based code has been generated for the whole street for every aspect of urban like utility, parking, streetscape, building façade, existing building renovation and projects some design ideas for future and comparing the form based code of two different street, some pattern has been found.

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Historic Site as the Core——Exploration the Characteristics of Urban Space in Contemporary Xi’an by Taking the Study of Historical Context as a Clue on

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Keywords: Historic Site, Urban Space, Xi’an, Historical Context

When the historic sites enter into the scope of the construction of the city, its material and connotation will inevitably participate in the evolution of urban spatial form. The historical site and its surrounding areas will become the city's most valuable embodiment of the region. And then, it will affect the form of urban space. Xi’an is known as the one of the four ancient civilizations, with Cairo, Athens, Rome. The city's urban construction history is about 3000 years. There are four famous dynasties which are called Zhou (B.C. 1046 –B.C. 256), Qin (B.C.221 –B.C. 207), Han (B.C. 202 –A.D. 220), Tang (A.D. 618 –A.D. 907). 37% of the current Xi’an urban space is overlying the cities of these dynasties. The distribution and form of these historic sites are important factors influencing the urban space.

This paper is based on the study of historical context. Sorting out the evolution process and schema model of urban space in Xi'an by means of mapping , Analysing the data of large sites in urban space
in Xi’an, and trying to explore the necessary relationship between urban space development and the protection of these historic sites in Xi’an consolidation. Fond the role of the great ruins changed in the urban space of contemporary Xi’an, puts forward the urban spatial morphology model of “Historic Site as the core” for the space characteristics of contemporary Xi’an city.

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O-0799

The Cultural Approach to Urbanism in African Cities.
Mapping the Past, Present and Future of Cities in the African Context.
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Keywords: Cultural Sustainability, Spirit of Place, Urbanization, African Urbanism

The background of the paper is on the global increase in urbanization, a significant part of which is taking place in the developing world especially in the African continent. The transition from rural to urban life is a significant cultural transition for many of the new settlers and in order to achieve sustainable settlements, there is a need for cultural awareness within the urban planning process. An approach with a cultural perspective that addresses issues of diversity; ethnic, religious, social as well as economic in order to create a sense of spatial justice within our fast-growing cities.

The objective of the paper is to pose questions on the role of Culture in shaping our cities, sustainable urban growth and the idea of cultural planning as an approach in urbanism. In this there is a discussion on the narratives of how people adapt to urban life and create a synthesis of how they maintain or transform their cultural identity within the new urban context.

The authors address the narratives from our past, our present and our future; the starting points of our African cities from a cultural perspective and where it has directed them and moving on from there to the future. This takes on a form of cultural mapping of the timeline of African cities. How do these cities maintain their genius loci in the context of urban hybridity and the possibility of homogeneity in the city today; reflecting on the fact that most cities undergo similar processes of transformation?

This paper attempts to give some insight on possibilities that will drive provocative questions on the current urban condition found in Africa and find new lines for new narratives.

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O-0558

Activating Urban Spaces and Communities through Arts and Culture: Boosting Local Identity and Social Bonding in Singapore’s Housing Neighbourhoods
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Keywords: Arts and Culture Nodes, Art Impacts, Community Art, Social Bonding, Neighbourhood Identity

‘Community Arts and Culture Nodes’ is an initiative established by Singapore’s National Arts Council (NAC) in 2011, with an aim to bring quality arts closer to the local communities. The pilot study was conducted in five local neighborhoods to investigate spatial and social impacts of the ‘Nodes’ initiative and strategies employed to activate public spaces through arts. An initial ‘Neighbourhood Arts and Culture Impact
Assessment’ (NACIA) framework was applied to conduct neighbourhood spatial opportunities analysis, surveys and focus group discussions with local residents node partners. Enriching public life, activating underused or neglected spaces, shaping stronger sense of identity, boosting community bonding and increasing public participation are some of the initial findings discussed.

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O-0626

Physical Element of External Space in the Apartment Complex that Influences Childhood Memory

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Keywords: Childhood Memory, External Space in Apartment, Physical Element, Residential Environment

This study is based on the fact that the degree of childhood residential environment memory influences the establishment of personal identity and value, behavior, and residential satisfaction. The purpose of this study, therefore, is to identify the external physical element of the apartment that affect children’s memory. To identify the long-term memory, the surveys were conducted by collecting words and sketches of memory factors of childhood. Participants were aged 20 to 25 and experienced in apartment living between the ages of 6 and 12 and 60 of the obtained entries were analyzed. The results indicated that the major factors for childhood long-term memories are related to the play and natural elements in apartment complex. Among the physical elements, the exercise and complex spaces influence childhood memory in the external space. It is shown that the space directly related to the children’s behavior influenced the memory. Therefore, natural elements should be designed to expand the scope of the residential environment surrounding nature. Additionally, it will be necessary to design a complex space for various activities and experiences. In short, complex space can form a variety of residential environment memories in childhood.

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PS1-52: CULTURE _ urban theory & design 4

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O-0571

Urbanization Research of Chinese & North Korean Borders from the Perspective of Urban Textures

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Keywords: China-North Korea, Urban Border, Urbanization, Urban Textures

This paper uses urban textures of two typical border cities, Dandong and Sinuiju as the point cut, looking back into the historical changes, to discuss the strategy of developing along the border with the grid blocks structure and railway station as city center, which are the great similarities of their process of
urbanization. At the same time, the paper compares several key elements of the urban textures between the two cities, which include closed or open landscape surface along the river, urban expansion along the river or railway lines, various or uniform building height, and various or uniform building elevation. The paper aims to demonstrate analysis of the cause, concluding two typical models of urban textures of Dandong and Sinuiju, and summarize the similarities and differences of their urbanization.

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O-0489

An Observation on Urban Regeneration in Beijing Old City During 2004-2016 and the Role of Architects

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Keywords: Urban Regeneration, Urban Conservation, Beijing Old City, Architect’s Role

The Old City of Beijing was highly praised as the “unparalleled masterpiece of city planning”, however, more than two thirds of its tradition urban texture was badly damaged in the last decades. After a long debate on preservation vs. development, a stringent principle of “integrated conservation of the Old City” was finally set out in Beijing Urban Master Plan (2004-2020), with corresponding conservation plans and policies gradually established. Some believed the regeneration of the Old City had since entered into a new era when "massive demolition for construction" would give way to small-scale "organic regeneration". However, is it the truth? In order to reveal the real status of overall textural regeneration of Beijing Old City after the implementation of the Master Plan, this paper compares the satellite maps of Beijing Old City from 2005 to 2016, and identifies about 750 changed plots. By examining these regeneration projects, the paper summarizes ten major regeneration types, and studied the spatial distribution, forming mechanism and general effect of each type. The architect’s contribution is also concerned.

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O-0294

Strategies and Tectics of Integrating Water with City in the Urbanization of Jiangnan Region

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Keywords: Southern Regions of the Yangtze River, Waterway, Urban Texture, Co-construction

The long history of urban development has seen evolving cultures of water-town in different societies, featuring an intimate relationship between water and the city. In southern region of the Yangtze River known as “Jiangnan”, water is the soul of a city. A sophisticated water network has become an organic part of urban building, as water and city form a unique harmony. Such traditional relationship between water and the city, however, are facing challenges as the city undergoes rapid urbanization and industrialization. New constructions often ignore the urban context and compromise the traditional water-town infrastructure and landscape. This paper re-examines the role of water in the modern cities in Jiangnan, and studies the way in which landscape urbanist approach to water can be incorporated to generate vitality of the city. According to the spatial structure of water-town in Jiangnan area, the integration of water and city in the urbanization should attach importance to the relationship of urban axis and water network, using public spatial node to enhance the urban-waterfront system, taking advantage of opportunities in urban renewal to reproduce the spatial order and urban image. Nevertheless, some tectics are put out to promote the integration in urbanization.

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Neighbourhood Development and Its Connection to Governance and Planning

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Keywords: Public Space, Urban Structure, Decision-Making, Prague, Development

The developments of residential neighborhoods are puzzling the cities and their peri-urban areas with less connectivity and accessibility, which were crucial factors for success in history. It gets reflected in the safety and resilience of such new neighborhoods, making them often weaker. Layer of public space creates environment in which interactions and urban life take place. A comparative study of various cases of the development of Central European neighborhoods shows their performance in terms of adequate public space share, overall connectivity and economical effectivity. We are convinced that with the use of planning and through responsible decision-making of cities there is a way to sustain these specific performances and characters. However, in the first place, the municipality has to have suitable tools and data at hand allowing it to determine the impacts of their decisions well. In the second place, they have to be aware of the difference between stable urban structures, which should be supported by planning, and young, soft and unstable structures, which should be left free and flexible on the grounds of a lack of knowledge concerning their future development.

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Parametric Approach for Urban Slum Upgrading Program along the Riverbank in the City of Yogyakarta, Indonesia

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Keywords: Urban, Slum, Revitalization, River, Parametric

To conduct urban slum up grading program along the Code river in the city of Yogyakarta a set policy for revitalization has been formulated. The local policy suggests three concepts in the land consolidation process, first is “mundur” (step-backward), then “munggah” (step-up), and “madep”, (face-up toward the river). This policy requires a detailed guideline to be more cost effective and socially acceptable. To formulate the guide line, we compared two approaches to operationalized the concept of “mundur” and “munggah”. With consider possible flooding in 100 years’ period and the guideline for riparian zone, we compare two option for stepping up and backward by increasing the safety standard for mitigating the flood. First approach is by increasing the standard vertically (adding the safety rate of 100 years flooding) and second is adding the safety of riparian zone at horizontal direction. The simulation was conducted with parametric approach simulation modelling with the input of the existing building level, water level, and the edge of the riverbank. The preferred approach is aimed to minimize the number of buildings to be revitalized. The results reveal that in general the vertical approach is more cost effective to serve revitalization program.

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O-0330

**Urban Linkages: a Methodological Framework for a Network Neighbour Centralities in the Periphery of Arequipa, Peru, as a Social -Environmental Alternative to Climate Change in Vulnerable Settlements.**

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**Keywords:** Periphery, Arequipa, Urban Linkages, Resilience, Urban Planning

Arequipa is a city that has grown in a fragmented, unplanned way. Many of its neighborhoods are isolated from each other, located in peripheral areas, lacking basic services, green spaces and with the consequent risk to the property and the very integrity of the population. This problem has recently been aggravated by the visible consequences of global warming.

Given this anarchic and disarticulated urban growth, the "Urban Linkages" project proposes an integrated model of social urban environmental planning in order to improve the resilience of vulnerable populations in Arequipa. This paper discusses a methodological framework which addresses 4 integral aspects of the problem: environmental, physical-spatial, social-economic and institutional.

This methodology will be used for the conception of a network of peripheral neighborhood centralities that, on the one hand, aims to enhance the population's capacities and, on the other, contributes to the prevention of natural disaster events. This network will articulate the urban development of these areas and the rest of the city, as well as increase both the passive and proactive urban resilience.

To this end, the methodology will be proposed in three levels: a macro-scale, a meso-scale and micro-scale, proposing a specific set of activities to be taken into account for this and similar situations where this model can be replicated.

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Tuesday, 5th September, 2017

PS2-11: FUTURE _ architectural theory & design 1

14:00-15:45 / 304 (3F)

O-0264

**Human Cognition Induced Urban Realm - New Directives**

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**Keywords:** Spatial Characteristic, Conditioning, Cognition Theory, Collaborative Integration Framework

Architecture should invariably mirror the aspirations and achievements of a society without forsaking the contextual identity of a region. Habitat realm should always be appraised contextually with reference to a given time and place; cities evolve as an indicator of advancements in a society. Nevertheless the anchoring notions of contextual regionalism and sense of locale are often lost in the days of contemporary and unsustainable global practices. The imageability of urban habitats all over the world have started to be characterised by a formal homogenous imageability; having concrete links to globalisation and modern construction technology. In this retrospective of changing times we should realise that the basis of meaning formation in cities should not be associated with a universal de-
contextualised knowledge base. The real issue is to develop cognitive strategies to help designers establish a link with the cultural rootedness; diversity and aesthetic sense of a locale. This would make the habitat design contextually relevant thereby establishing a sense of possession and distinctiveness. This should hold true while revitalising existing habitat realms as well as while conceiving new interventions at micro and macro settings. A theoretical proposition with descriptive rationale is envisioned to facilitate cognition, explain appraisal styles, rationally define the process and classify the parameters involved while choices are being made.

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O-0596

Constructing the Meaning of Mundane Urban Places through the Mapping of Geo-Tagged Social Media Content

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Keywords: Mapping, Self-Organizing Map, Everyday, Geo-Tagged, Social Media

This paper shows the possibility of constructing meaning in mundane places in the city through the mapping of geo-tagged social media content. Over the last decade, the Internet and digital technologies have transformed the way we relate ourselves with identities and places. This phenomenon is proliferated by the merging between social media platform and the geographical information that is enabled by smart phone. The act of sharing voices, activities, or ideas about certain places through social media has become our everyday practice. These voices could reveal the stories of mundane places that play an important role in creating identity in urban context that is hidden within the interconnectivity of its elements so-called topology. The Self-organizing map (SOM) is used to reveal the internal pattern behind the presented elements in the content of geo-tagged social media on particular locations. Therefore, the resulted topological pattern could be seen as the construction of meaning of everyday articulation that is shared among the social media users. The mapping thus shows the shifts on the construction of meaning in the technology-mediated space, described as embedded condition that suggests changes in the current spatial practices.

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O-0396

Approaches to a University Urban Design Curriculum for 21st century Cities

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Keywords: Architecture, Curriculum, University Education, Urban Design

This paper examines approaches to a contemporary urban design curriculum. It considers such questions as: What general direction should a contemporary postgraduate urban design curriculum take? Should it be more focused on practice, more biased to historical and theoretical issues, or give greatest emphasis toward developing research-led policy and regulatory frameworks? How best to address the new scale and complexity of intertwined urban forces and values and the transdisciplinary knowledge required to respond to them? To begin to answer these questions, this paper undertakes a comparative survey of three approaches to a contemporary urban design curriculum. Focusing on program structure, key elements, and future challenges in the university education of urban design professionals, the paper contributes to scholarship on the practice and theory of urban design education and aligns with Congress theme Future.

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O-0458

Men-friendly Society: An Exploration on Mixed-Community Mode for High-density Cities in Ageing Society from the First Prize Team Work of ICCC Competition

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Keywords: Aging Society; High-density Cities; Men-friendly; Mixed Community; ICCC Competition

China as well as many other developing countries has not prepared well for the rapidly aging population. With the trend of global ageing becoming ever more prominent, ICCC Competition was established by the International Council for Caring Communities’ (ICCC) to encourage designers from all over the world to explore innovative design solutions. By focusing on the design strategies from the first prize team work of ICCC Competition, this paper proposes that the future Chinese residence mode should be formed following the philosophy “nature and inaction” from Lao Zi. The environment is considered to be friendly to anyone in the community but not only for the elderly. This paper conducts an exploration on mixed-community mode for high-density cities in ageing society on three aspects, which are design-philosophy transformation from old-friendly design to men-friendly design, design-concept transformation from small community to big society, architectural form transformation from low-rise community in uptown to high-rise building in downtown. Although the outcomes proposed in this paper are hypothetic, the findings are relevant to all countries or regions with high-density population and short-land resource like China. It provides a possible solution on ageing problems on architecture aspect in the future.

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O-0112


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Keywords: Sharing Modes, Public-Private Mixed, Urban Life, Future

Nowadays, massive urbanization leads to ever-higher densities in cities. We can see in a lot of buildings, public and private functions are combined, even have an overlap of each other. The sharing phenomenon of public and private has become a new trend of future city life. This paper selects several cases in different cities which are all private-public mixed small-scale public buildings. For example, Quico Jingumaen Tokyo, Pinto&Sotto Mayor bank in Portugal, Schmela House and Gallery in Dusseldorf, etc.. By comparing these projects, the author aims to discover how to integrate multiple urban functions in one building. Several sharing modes are found such as view-sharing, circulation sharing and share of adjacent space. The research on the sharing modes of private-public mixed small-scale public buildings reveals enormous potentials of urban life. By applying these design methods in architectural practice, diversity gradually appears, the flow of people increases, and the value of space rises. Hence we can provide the city with more space of interaction and efficiency.

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O-0882

Multi-Level: a Way to Study the Pattern of Urban Open Space in High-density Environment

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Keywords: Urban Open Space, High-Density, Multi-Level, Space Pattern

Hong Kong is a city with extremely high density. Under the pressure of economic development, the conflict between the requirement for an enhanced living environment and the improved efficiency of land utilization contributes to the diversity and complexity of urban open space (UOS). Based on the hierarchy conception for dividing living environments into different levels from Habraken, this paper uses the multi-level framework to study the types and forms of Wanchai’s UOS in four levels. This paper traces the changes in eight major types and their sub-types of UOS in every level. Representative sites are used to illustrate the transformation of UOS between different types across the four levels. Moreover, discussion is developed on whether these changes can reveal the causality between a certain historical background and the present situation of UOS.

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Tuesday, 5th September, 2017
PS2-21: FUTURE _ urban theory & design 1
14:00-15:45 / 305 (3F)

O-0665

Tokyo Playground: the Interplay between Infrastructure and Collective Space

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Keywords: Infrastructure, Recycle, leftover, Sakariba, Collective Space

Tokyo Playground aims to investigate the leftover space produced when the infrastructure overlaps with the urban tissue and to highlight how these are metabolized, then transformed into meaningful public spaces. The ‘hybridization’ of Tokyo is examined using three references as a starting point. First is the spatial typology of sakariba that transformed what were transitional zones into pleasure districts during the Edo period, creating what was arguably the most definitive type of collective space for citizens of Edo. The second reference is Roland Barthes’ description of the infrastructural experience. Thirdly, the book Made in Tokyo illustrated the strong mutual dependence between infrastructure, architecture and the city as a unique characteristic of Tokyo. Transit space can be reused on the human scale with different programs related to time for pleasurable activities. Tokyo Playground aims to capture the idea of emotional space within infrastructure. It aims to highlight some possible design strategies and tools that help to domesticate the infrastructure through the injection of pleasure and playful programs with an understanding of how humans experience, occupy and interpret such spaces. Leftovers within the infrastructure are opportunities for social and ecological reuse and these precious voids contribute in creating the contemporary soul of the city as it becomes the source of vibrant energy for transcultural urban regeneration.

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O-0795

Should Architects Work For Mastaans For House Reconstruction Activities?

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Keywords: Slum Upgradation, Reconstruction, Community Participation, Urban Planning

Dhaka, the capital of Bangladesh is the city where more than 40 percent of people live in the informal settlements, mostly in slums. Only less than 10% of the areas of Dhaka city can be termed as planned areas and less than 5% of the population own land in any form of land tenure ship and the rest are living on a rental basis. The term house-owners and land-owners are not synonyms in case of slums of Dhaka city as in most part of the world. Here the house-owners are those who illegally occupy public lands and build houses for their own living as well as to rent out to other people.

On 4th December 2016, a fire broke out in Korail Slum, known as the capital of slums of Dhaka city and destroyed about 535 houses owned by 86 owners or Mastaans. After a week later, on the 11th December 2016, another fire gutted down 115 houses of Saattola slum, about 29 house owners were affected. We, a group of architects, planner, and engineers together with architecture students from different universities of Dhaka city decided to support both the Korail and Saattola slum community upon request of the Urban Development Programme of BRAC.

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O-0680

Rio de Janeiro Adaptation and Resilience in Climate Change

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Keywords: Resilience, Adaptation, Climate Change, Rio de Janeiro

This article discusses the potential of some urban adaptation measures of low political and financial cost in expanding the resilience of the city of Rio de Janeiro with regard to the impact of the climate change. Large cities, such as Rio de Janeiro, still grow in an unsustainable pattern of urbanization that increases segregation, inequality and urban poverty, making them progressively more vulnerable to existing and future events of climate change.

The adaptation of such cities is a matter of urgent investment, at a time when resources are often insufficient even to meet the basic needs of housing, sanitation and transport, much less for adaptation measures for the uncertain impacts of climate change that are needed swiftly. The research shows that many actions are feasible at low political and economic cost, overcoming primary challenges and increasing the city's resilience by changing the urban and building parameters for the occupation of new areas and the conservation of areas not yet occupied within the city, thereby controlling the process of newer and expanding areas before investing in the transformation of the existing, consolidated and thus, more costly areas.

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O-0089

Affective Mapping of Rio de Janeiro: the Spaces of Passion and the Soul of City

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Keywords: Cartography, Public Space, Intervention, Art, Appropriation

This paper presents the cartography of temporary interventions in Rio de Janeiro as a way to identify the city's places of passion, expressions of its citizens. The cartography is dedicated to mapping the passion printed in the city through interventions such as spontaneous appropriations, public art interventions and local festivals. Its objective is to present how the cartography allows a reading and interpretation of the city through the interventions that take place in its public and collective spaces, using the tools available in the platform.

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O-0538

Munich 19.21

A Strategic Design Proposal For The Growth Of Munich

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Keywords: Munich, Growth, Strategy, Design, Proposal

Munich 19.21 is a strategic design and communication proposal dealing with the rapid growth of Munich, Germany's 3rd largest city. It works with a graphic and quantified approach, thus tackling the several major issues that accompany growth: communication and visualization of ideas and the creation of a specific sense of place. It is a visual and playful approach, working with existing urban patterns and structures. Well established architectural methods are used: research, copy, quantification, and adaptation in order to show the genesis of a specific sense of place.

Munich 19.21 tries to answer several questions: Could one turn the impulse of massive growth into a positive momentum, leaving behind new parts of cities with a specific sense of place? Could one use the existing DNA of urban structures as a foundation for the genesis of urban places? Could one use “Objet Trouve” structures and modify them for new uses? Could one take away the concerns over change and turn it into a vision instead?

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Nine Maps for Seoul

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Keywords: Seoul, Urban Analysis, Map, Contemporary City

The theme of a city is widely recognized as one of the central issues for the next decades. A lot of disciplines approached the study of urban phenomenon and described the city from different points of view. Urban studies have offered different approaches which can be considered an important contribution of our disciplines. Seoul can be considered an ideal field of application of the urban analysis regarding its complexity and stratification, in a way a paradigm of the contemporary city. Our work aims to propose the description of Seoul through new thematic maps which offer different interpretative scenarios, beyond being the descriptive instruments characterized by a selective approach. This aims to indicate the project potential which each city contains in regard to qualification processes.

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Surveying Data from CASA, a Sustainable House Prototype in Mexico City

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Keywords: Sensors, Sustainable, Data, Housing, System

CASA a housing prototype that participated representing Mexico for the first time in Solar Decathlon Europe in 2014 has become an open laboratory at Universum Science Museum, for testing design strategies through a new sensor system specially fitted that will acquire information from around 70 variables in order to help improve best practices towards a more scientific approach in Architecture Engineering and Construction activity.

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Waste minimization with Architectural Design Practices in Lagos

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Keywords: Waste, Management, Minimization, Architectural Design, Architectural Practice

Waste is a global problem causing substantial environmental impact. In the building industry, waste minimisation and management practices have become an essential measure in construction; due to the concern of impact caused by construction waste. The aim of this paper is to examine the feasibility of waste reduction during the design stage of an architectural project. Its main objective is to create an awareness on the possibility of determining waste to be generated before it is generated and managing it from the design stage (source). In light of these, the paper evaluates current waste minimisation schemes in Lagos architectural firms, identify barriers and possible incentives for effective waste reduction practice using questionnaires administered specifically to architects, based on minimization issues in design and construction. This paper also stresses the use of the waste hierarchy 3R’s (Reuse, Reduce, Recycle) that have been adopted for waste reduction in general. The research concludes by stating that management of waste within the building industry in Nigeria comes up when actual physical waste has been produced and little has been done concerning managing waste from its source. The paper therefore recommends that waste management be addressed from its source and architects, other professionals should adopt an effective waste management practice and implement it in all stages of development.

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Energy Efficient Lighting Design for Historic Buildings in Yogyakarta, Indonesia: Lighting of Soulfulness of Malioboro Shopping Street, Yogyakarta, Indonesia

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Keywords: Luminaire Design, Radiance, Energy Efficiency

The design of energy efficient lighting in historic streetscapes presents greater challenges than that of new streetscapes due to the additional constraints related to the importance of preserving the streetscapes’ architectural style, history, integrity and its soulfulness while also allowing for the streetscapes’ new function in an energy efficient manner.

This paper presents the lighting design studies of streetscapes and streetscape along Malioboro Shopping Street Yogyakarta, a case study that takes into consideration all of the above aspects. Electrical energy conservation is most used energy in commercial streetscapes in Indonesia and this paper aims to evaluate the alternatives of lighting design based on holistic lighting approach with Radiance and Open Studio software.

The luminaire and the lighting design of Malioboro Shopping Street was based on the careful study of the remaining original luminaire. Through an integration of proper lighting design techniques for historic streetscapes and based on the lighting needs for the streetscapes’ new function and energy efficient, lighting design is established. Post occupancy illuminance measurement shows that the illumination in most area are inadequate. The design approach presented in this paper can potentially be applied to other historic streetscapes with similar function to preserve the soul of the urban heritage.

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O-0201

Hourly Solar Radiation Analysis of Buildings within 48 Facings in FuZhou, China

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Keywords: Passive Design, Solar Access, HVAC Loads, Energy Conservation

Energy efficiency in buildings plays an important role in electricity consumption and greenhouse gas emission. Natural resource concerned in early design stage will not only achieve energy-saving but has chance to improve sustainability during life cycle. This paper intends to discuss the relationship between solar access and heating and cooling loads in buildings via local climate condition, that is, the hourly data of sunshine hour records observed from 1953 through 2007. In this paper, AHRAE standard with base temperature of 26.7°C and 18.3°C for cooling and heating calculation of HVAC loads were used to determine the hot and cold periods in FuZhou. The direct solar radiation will be applied to accumulate solar radiation values with 48 vertical facing of buildings for cooling and heating respectively based on the 55-year hourly sunshine hour. Annual solar radiation in 48 orientations will be studied to evaluate solar access in heating time and cooling time, moreover, difference in solar radiation value between heating time and cooling time shows solar demand and shading demand to assist reduction in heating and cooling loads for buildings in FuZhou. The results will provide more comparison and flexibility to be applied in thermal comfort and show a decision-making framework of solar access in early design stage for energy concerns in shading device design.

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O-0127

Design and Construction Excellence for the Future of New York City

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Keywords: Design, Equity, Sustainability, Resiliency, Health

The Design and Construction Excellence program of the City of New York brings together innovative design and construction strategies to build a thriving, dynamic, strong and just city for all. To enhance the value and effectiveness of the Design and Construction Excellence program, the Department of Design and Construction, the City’s public works agency, has developed a set of Guiding Principles. They provide an invitation to architects and designers to advance design through the lenses of equity, sustainability, resiliency and healthy living. The Guiding Principles for Design and Construction Excellence reflect a new commitment to deliver responsive, innovative and enduring buildings and infrastructure. Since its inception in 2004, the Design and Construction Excellence program of the City of New York has represented the critical force needed to foster aesthetic, technical and functional innovation in public buildings. Projects have received extraordinary recognition, winning many design awards. Through partnerships with world-renowned architects and diverse, emerging talent, DDC delivers projects that exceed expectations and reflect the city’s culture. As the foremost municipal design and construction agency in the United States, DDC is charged with meeting these challenges as change comes to the growing communities of New York, shaping the city of the future.

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Form-Based Code in Parametric Modelling: Preserving Urban Fabric Characteristic as Soul of Bandung, Indonesia Old City Center

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Keywords: Form-Based Code, Urban Heritage, Parametric Modelling

With the New Urbanism arising in 1980s, people began to rethink urban problems caused by rigid segregation zoning, such as the decline of pedestrian and use public transport, disappearing of public realms, damage of natural environment and decay of old city center area. Yet there are still many problems leading to a more holistic and persistent design involvement.

This paper aims to show how parametric modelling in connection with the Form-Based Code (FBC) methodology could support design development in an urban scale with the case study segment of Grote Postweg Old City Center of Bandung, Indonesia. FBC is an approach to optimize conventional zoning regulations and has been implemented by a number of cities. FBC is crucial for city development to develop main objectives, preserve urban characteristics, trends and impacts in a design process systematically and logically, while keeping the urban heritage character of the old city center. Zoning emphasizes excessively on land use and intensity control. Then FBC promotes to (re-)create and predict urban heritage environments through controlling forms. FBC develops and offers opportunities for flexible coding processes, adjustment of density and seamless public participation. Since Architecture, Engineering and Construction (AEC) Industries already have accumulated experiments by taking the idea of parametric modelling techniques, it has become clear that parametric tools could bring similar benefits to urban design projects, having even effectiveness in higher scale urban cases (Nagy, 2009).

Since FBC aims to create or recreate physical urban environment, considerable data represented space form information should be collected. In addition, FBC is a numeric-based design approach. Some related illustrations have to be changed when values in sections are changed. That makes FBC less flexible. Parametric modelling can help FBC overcome these kind of limitations. It becomes easier for planners to update models by changing parameters in form-based coding, avoiding spending time to re-edit illustrations. Besides, sharing database to sectors is another benefit parametric modelling offers for FBC.

Parametric modelling, as a rule based, is a significant step towards urban design creating a mechanism for FBC. This paper presents the process to build a framework to connect parametric modelling with FBC processes, and how parametric modelling methodologies allow the form based coding processes to be more impeccable hence being more appropriate in the process of design flow and make sure heritage area being designed on its own soul with its own characteristics.

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O-0440

A Study on Design Review Systems utilizing the Landscape Act in Tokyo
- Notes on Examples in the Urban Regeneration Special Districts -
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Keywords: Urban Regeneration, Design Review, Landscape Act, Public Space

This paper examines possibilities and concerns of the Design Review Systems that utilize the Landscape Act in the Urban Regeneration Special Districts in Tokyo. The Tokyo Metropolitan Government operates the Landscape Act in conjunction with the design review system for the special permits that enable the projects to gain FAR bonus. In this system, the developers are requested to present their proposed schemes to the Landscape Committee and obtain their recommendations prior to their application for the special permits typically shown in the Urban Regeneration Special Districts. Therefore, the review system is expected to function as a controlling device between the demands for the urban developments and the expectations for the mature, high-quality urban landscape. In the paper, examples are reported through observation of the review processes in two districts, the designated districts surrounding the Imperial Palace and surrounding the Shibuya Station. Based on the analytical comparisons of the reported examples, the consideration aims to achieve highly balanced control between the public benefits and private merits in the metropolitan space in Tokyo. It is noted that both transparency and responsibility of the design review process is important in order to make the deal making between them reasonable.

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O-0525

A Stowaway from Sacred Metaphor to Everyday Life: Pujing Folk Religious Landscape in the Historic City of Quanzhou

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Keywords: Religious Landscape, Architectural Heritage, Sacred Place, Pujing Folk Religion, Place Identity

This paper draws on fieldwork research conducted in the historic city of Quanzhou, to explore pujing folk religious landscape as witness to the entwinement of sacred metaphor and everyday life. Pujing is a kind of folk religion related to specified communities. Each community has its own sacred territory on which temple is sited and divinity is manifested, leading to a ritual unity in ancient Quanzhou. As pujing tradition originates in ancient China and is still represented in modern Quanzhou, it reveals both the cosmology of traditional cities and the absorption of heterogeneous urbanism. I would like to look in how the spatial pattern came into being, which is based on interpretation of heritage, concerning the ways of understanding architecture and space in a traditional cultural context; and how the system functions today, which is based on recognition of heritage. The juxtaposition of different types of pujing temples acts as a notion of ‘modern archaeological finds’ that reveals the traces of a spatial concept that essentially has interaction with people for long but is newly exposed to transmutation in a modernized urban context, in order to delve deeper into the memory and thus discover different mental and sensual spaces through time.

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O-0400

Study on the Planning of Characteristic Towns in Liaoning under the Perspective of Cultural Regeneration

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Keywords: Characteristic Town, Regional Culture, Regeneration, Planning study Liaoning

Due to the severity of urban duplication, many cities lack characteristics, which is a smothering of the urban spirit and loses the most precious unique features of urban culture. The city needs to obtain its momentum for economic and social development from regional cultures, since regional cultures are the fountainhead of urban characteristics.

Under this background, the construction of characteristic towns becomes a huge strategic choice for the Chinese government. The aim of constructing characteristic towns is to break down urban and rural dual structure, expedite new-type urbanization, promote economic and societal transition, and improve villages and small town living environment. This paper takes the first batch of four national-level characteristic towns in Liaoning as its objects of study. The paper investigates the population distribution, production layout, national space usage and the ecological environment protection of characteristic towns based on the literature materials of overall planning, land use and tourism development. Combined with on-spot investigations, it studies the process of how modern service industry dominated by “tourism +” can be achieved; how to construct an ecologically livable environment through infrastructure and ecological environment construction; how to combine historical and cultural deposits with modern features in creating a distinctive small-town culture. In the end, the paper conducts a discussion and summary of the strategic planning of characteristic towns.

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O-0879

The Influence of Pathok-Negoro Mosques on the City Wide Dimension of Cultural Speciality for the Future Planning and Design of Yogyakarta

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Keywords: Pathok-Negoro Mosques, Cultural Specialty, Urban Design, Yogyakarta

This paper analyzes the role of Pathok Negoro Mosques in retaining and enhancing the Yogyakarta’s identity by allowing the integration of previous and future development structures. Based on The Indonesian Law no. 13, 2012 the draft of Local Regulation says that the specialty of spatial arrangement is determined by the historical origins. However, the current condition in Yogyakarta does not consider the delineation of the Pathok Negoro Mosques. Imaginary and philosophical axis are crucial for Yogyakarta future spatial integration in urban design and planning. In this respect, the Heritage Site, and other cultural areas with distinctive spatial structures, building patterns, townscapes, special characteristics and landmarks. The analysis uses qualitative and quantitative approach to support the structural and spatial description of the cultural contribution of the Pathok Negoro Mosques. This paper argues that Pathok Negoro Mosques have a potential contribution to form the cultural specialty of distinctive spatial structures, skyline building patterns, and landmarks.

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Tourism against Soul of Heritage City

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Keywords: Preservation, Heritage, Urban Planning, Touristification, Center

The objective of this paper is to analyze the influence of tourism on the disappearance of the traditional soul of a city and the emergence of a new one, a “tourist soul”. In Latin America several heritage cities are experiencing urban transformations associated with tourism. This paper explores this trend in one of its most complete expressions: tourism as a transformative vector of the traditional built heritage. Through the case of Guanajuato (Mexico) and other Latin-American cities, this work identifies the main architectural and urban transformations that are derived from tourist use in the heritage cities. Data were collected on the base of a qualitative research (theatrical analyze, statistics, historic documentary and direct observation on the field). Historical archives of the twentieth century were consulted to evaluate the transformations. Finally, statistical information on uses of buildings and heritage landscapes was obtained from the city’s tourist office. The new tourist uses significantly change the patrimonial and traditional typologies, generating a new architecture thus a new soul. Tourism is seen as a transforming factor of the city, not without contradictions because the cultural, patrimonial and social resources, on which the prestige of the resort depends, can be altered by a “tourist soul”.

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Why Did Socrates Not Leave the City?
A Question on the Phenomenon of Urbanity

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Keywords: Urbanity, Conflict, Otherness, Socrates

The essay develops a new perspective on urbanity through an analysis of the Socratic dialectic, which I argue is a product of the urban space and encounters with urban citizens. Focusing on discussions Socrates conducted with his fellow Athenians, it introduces a conception of the urban that emphasizes the importance of otherness as a structure that is inherent in the city. Moreover, it discusses the question of urbanity as it is presented in the Politeia by Plato, focusing on the notion of conflict as constitutive of urban space. It suggests thinking of the conflict not as an aberration, or an exceptional condition of public space, but as a form of the urbanity.

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Souls of Past Heroes, Gains of Today and Actions for Tomorrow: Lessons from Comparative Study of Indoor Thermal Comfort Conditions of Traditional and Contemporary Building Types in the Dry Season at Okigwe, Nigeria

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Keywords: Contemporary Building, Dry Season, Okigwe-Nigeria, Thermal Behaviour, Traditional Building

The differences and similarities between indoor thermal environments in Okigwe, Nigeria, and the extent they have been nurtured or 'de-nurtured' in traditional and contemporary building types were examined in this paper. Four hundred copies of questionnaires that sought information on thermal characteristics of building types and thermal sensation votes based on the ASHRAE scale were administered on randomly sampled adult occupants of regular households. Field measurement of air temperature and relative humidity were simultaneously monitored and hourly values recorded from November 1, 2015 to March 31, 2016 in nine (two traditional and seven contemporary) systematically selected building types. Mean dry season indoor air temperature (28.8°C) and relative humidity (54.7%) values of traditional building types were lower than those of contemporary building types by 0.6°C and 1.2% respectively. At 95% confidence level, significant differences were established between thermal sensation votes and air temperature values of both building types and none for relative humidity values. The paper therefore, concludes that there are lessons to be learnt from the styles of traditional buildings and recommends that architects and planners should re-integrate the practices of our forebears in the discursive field of low energy consumption for maximum indoor thermally comfortable environment.

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Study on "Shape" and "Type" of the Aesthetics image of Container Structure

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Keywords: Container Building, Combinational Form, Culture, Aesthetics

Container Building is a kind of industrial building. As it has a higher level of prefabrication, it is gradually being widely used. In China, the construction of civil infrastructure is in the middle of transformation and upgrading process. Because of Container Buildings limited by theirs fixed size, material, shape etc. The above features cause the designs of the container architectures have some imperfections, such as the monotonous styles, the shapes are almost same and lack of personalized designs. This article take China southern container building as an example, through the analogy analysis of traditional architecture and Container architecture to explain deeply the process for beautifying the container material and the cases of architectural combination, summarize the aesthetic principles of container buildings and endow the new aesthetics, which are keeping pace with the time, to container buildings. In conclusion, this article will provide beneficial references for the future designs of container buildings and their derivatives.

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O-0590

How Buildings Got Bullied: Claiming the Rights of the Buildings

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Keywords: Bully, Representation, Narrative, Perception, Media

Images of buildings as architectural projects could be established through public perception and judgment. The ease of access to their online publications encourages public discourse on urban architecture and allows people to experience architecture without direct interaction. Eventually, the way the buildings are perceived, experienced, and judged might be shifted. Problems may arise when people only scroll through the pages without knowing exactly the real story behind the buildings. The buildings get bullied due to partial misinterpretation or misleading narratives.

This paper intends to claim the buildings’ rights to be accepted by people. Let people become the co-author of the building’s narrative. We address the issues by observing the different ways bullying occurred on worldwide-known as well as local projects. The different forms of bullying may represent the manners in which buildings could be represented, through the use of texts, images, and symbols to identify different elements that could distort the perceived narratives of the buildings. In the end, we suggest that architects should not fear or become too defensive when facing such bullies. Bullying is another kind of acknowledgement; a form of celebrating every single element of the building that, despite mocked, still sticks in the people’s memory.

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O-0524

Collaborative Learning Space for Music Community in Yogyakarta, Indonesia: A Design Exploration

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Keywords: Co-Space, Music Community, Studio Work, Music Education, Collaborative Learning

The increasing interest of musical arts among youth especially in Yogyakarta leads to a rapid proliferation of community based both formal and informal musical groups. It drives a necessity to provide those groups with spaces to learn and perform. Formal institutions namely universities and schools can only be accessed by formal educated students. In the other hand, many informal music groups also need spaces to learn and perform. Student-centered learning and information technology in education has been a popular trend among universities in Indonesia. Arguably it also generates the development of collaborative learning space and collaborative work spaces in Yogyakarta. It gives a space with proper facilities for students to learn and work along with their companions at any time possible.

This paper will report surveys on the proliferation of those collaborative learning space in general and musical community needs. We try to map the relation between the design typology provided by the existing space and the need and expectation of the community. It is then discussed and elaborated the (new) contextual collaborative learning concept as an approach to design a learning and performing space for musical arts. This paper will indicate a proposal of a new concept of architectural space and collaborative learning in terms of music education. The spatial layout, building performance and visual preference of the design proposal will be tested to community expectations.

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O-0729

Duality in Drawing ; Potential of Discursive Drawing Responding to Complex City

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Keywords: Drawing, Transparency, Duality, Complexity, City Fabric

Advancing drawings with their potential analysis, separate from that of its creator and beyond its representative qualities, this paper is aimed at investigating drawings hold on architectural discourse. Clarifying limitation of conventional approaches of literal representations and reading from Rowe and Slutsky essay Transparency stresses upon the notion of phenomenal transparency that has ability to deal with the complexity of architecture and the city. Complexity and Diversity are key urban concepts to advance management of cities and engagement of its populations. The research conducted challenges the role of drawings and diagrams within architectural projects that directly affect the constitution of future city fabrics.

Understanding architecture as a discourse permits looking beyond the practice of built form or an accumulation of engineerings and environmental devises, towards spatial qualities and organizations that shape our society and cities. Drawings, therefore becomes tangible forms of knowledge, acting as instruments, articulating problems rather than deliverables of fixed images. Through this paper, I further the argument using examples that look at drawing within the research of urban complexities and problems of domesticity that differ from purely literal representation and renderings.

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Tuesday, 5th September, 2017

PS2-12: FUTURE _ architectural theory & design 2
16:00-17:45 / 304 (3F)

O-0896

Future of Undergraduate Programs in Brazil

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Keywords: Brazil, Education, Opening Courses, Architecture, Urbanism.

This text presents a report resulted from agreements between the Council of Architecture and Urbanism of Brazil – CAU/BR, and the Brazilian Ministry of Education – MEC, as well as between CAU/BR and the Brazilian Association of Architecture and Urbanism Education – ABEA, in order to provide MEC major remarks considering the opening of new courses, official recognition and license renewal of already consolidated architecture and urbanism undergraduate programs. By the end of 2015, Brazil had 204,450,649 inhabitants, 134,183 architects and urbanists and 423 schools of architecture and urbanism. The teaching of architecture and urbanism has begun in the country with demands for military architecture, followed by the creation of the beaux-arts and the polytechnics schools. During the 1960’s,
architecture and urbanism programs endured the University Reform implemented by the military government, a situation that has inspired the foundation of ABEA in 1973 to stand up in resistance. A new curriculum in 1994 provided the autonomy claimed by undergraduate programs, reassured with its 2006 and 2010 versions. Although these three curricula complied with the International Union of Architects – UIA, recommendations, the self-ruling they consequently provided to educational institutions is also related to the way courses proliferated across the country in the last two decades. The work methodology analyzed, compared and geographically referred population and human development indexes, number of schools, professionals, companies and technical liability records (RRT). It has been considered: the ratio of 2000 inhabitants per professional (UIA), the 150Km range for schools (ABEA) and the minimum parameter of 20 actively working architects and urbanists in a given area, with whom the students could train with (ABEA). The conclusions highlighted differences and similarities between regions, states and municipalities. Schools are concentrated in metropolitan regions, which in Brazil are commonly the state capitals, where the number of architects and urbanists far exceeded the UIA index recommendations. The largest concentration of professionals and courses are located in the southern and southeastern states, while the northeastern and the interior of the northern regions, where the demand for opening of courses has recently raised, remains with insufficient student training opportunities. The northern border area exposed the worst indexes, emphasizing the lack of schools as well of architects and urbanists. It is recommended that higher education institutions offer adequate vacancies to architecture and urbanism programs to diminish the existing disparity and to better distribute professionals in the country, as well as it is important that architects and urbanists increasingly engage into professional mobility, leaving the place from where they are based to meet the populations where their presence is needed. This dispersion over Brazil is mandatory for strengthening the architecture and urban planning practices and to write off unqualified individual who are performing this role due to the inexistence of properly prepared professionals to fulfill this purpose, a needful strategy for the future of our cities.

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O-0388

Extension Architectural Design Data Mining—A New Solution for Architectural Problems in Big Data Era

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Keywords: Architectural Case, Case-finding, Data Mining, Architectural Problem, EADDM

With the rapid growth of data on the internet, information excess has replaced information shortage, which becomes a new trouble for architects. When architects need to find architectural cases as references for the problems they encountered, a lot of time has to be spent on manual case retrieval from websites. This study proposes an extension architectural design data mining (EADDM) system to find cases for contradiction, quality and innovation problems which are encountered in design process. By a four-stage process which is comprised of data collection, preparation, storage and analysis, the most valuable case can be found from a number of professional architectural websites automatically. The result of control experiment shows the advantage of EADDM in efficiency and accuracy. With the help of this system, much time spent on case-finding can be saved and architects can think more about design at the same time. The proposed EADDM system is expected to be useful for architects with different requirements worldwide.

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O-0613

Embracing Our Seniors with Energetic Soul

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Keywords: Ageing, Elderly-Friendly, Inclusive Design, Future, Urban

In a city, its people and its built environment are inter-connected; together they cultivate the unique soul of the city. Energetic and vibrant, Hong Kong is no exception, when facing with the global trend of rapid demographic change, moving towards preserving the uniqueness of our soul. The latest population projection of our seniors aged 60 and above in Hong Kong will keep growing to 2.63 million in 2030. Urban landscape and built environment contribute largely to the urban-friendliness of a city. The environment and public buildings have a major impact on the mobility, independence and quality of life of the elderly and affect their ability to “age in place”.

In this paper, problems encountered by the elderly will be identified. Recommendations on elderly-friendly design focusing in four aspects: visual, hearing, locomotive and cognitive, will be made. With quality design for the health, safety and accessibility of the elderly people in a built environment, the elderly can enjoy life with autonomy which is essential for happiness and health and in turn, to achieve the goal of energising and sustaining our city for long term future advancement.

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O-0902

Building Envelopes for An Engaging and Interactive Urban Environment

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Keywords: Building Envelope, Facade Design, Urban Design, Sustainable Community, Interaction

This paper aims to confront the misconception of façade design where building envelopes and its parts are rationalized and mostly reduced to a utilitarian purpose or superficial representations only. Little is investigated about the implications of building envelopes and its impact on urban community and urban development that is synonymous for rapid industrialization and modernization but also characteristic for its monotonous appearance, sameness and lack of architectural design. Therefore, the paper first focuses on the evolution and misconception of building envelopes and its role in contemporary architecture and urban design. Second, the paper briefly assesses the predominant building envelope types. And third, the paper attempts to show the implications of building envelopes for creating engaging and interactive environments that can add value and promote sustainable communities beyond the limitations of energy conservation, efficiency and superficial representation only. Finally, this paper attempts to re-address the role of building envelopes and its need in contemporary architecture and urban design. For the design of building envelopes, the paper suggests that questions of building envelope (i.e. form and function) can also be questions of sustainable community (i.e. walkability and diversity) and questions of engagement and interaction.

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Deform, Reform, and AI Carrier City

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Keywords: Deform City, Reform City, Logical, Innovation Form, Algorithmic Architecture

Internet+ era and architecture industry technology revolution have made human lives changed. It is important and interesting to study on city renewal and architecture innovation for future centuries. This study is aim to promote urban innovation strategy. The author uses a deconstruction method to discover the future shape of cities. Author pointed out that the city will be a carrier in the future, which controlled by AI technology; it will be more logical and critical, integrating more computer simulation technology. In the carrier city decades, the soul of city will be human souls-their critical minds. The author raised the concept of “Deform, Reform & Critical city” for setting up the theory system prototype of carrier city. According to the projects and practices, simulation and project practice evidenced how logical and critical thinking affect the individual buildings in a city innovation strategy. Due to the architecture will reflect the spiral of the time; another practice is to show how “Deform, Reform & Critical city” thinking will be reflected to the building form. The buildings will be partition installations on the city carrier. In the future the city will be reformed from its soul renovation, reform the shape of city from the intrinsic to its phenomenon.

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"Integrated" in Early Childhood Development Education and Design Practice

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Keywords: Integrated Design, Integrated Early Childhood Development, Research-Creation, Design Ethnography, Informal Settlement

South African researchers used a 2016 study to assert that inadequate early childhood development (ECD) diminishes South African children’s potential and life chances. A national audit of ECD centres (ie, crèche, or daycare centre) found that substandard infrastructure was the biggest impediment to advancing SA’s ECD policy. More standard infrastructure not only makes delivery of the National Curriculum Framework more possible in a safe learning environment; meeting health and safety requirements means that more centres can be certified by authorities and, thus, become eligible for state subsidies used to underwrite parental ECD expenses.

The proposed paper is used to address the infrastructure shortcoming. It is based on a research-creation project in which the authors design, construct, and study two prototype ECD centres in South African informal settlements—one urban and one rural. Generously funded by the Social Science and Humanities Research Council of Canada (SSHRC), the project and proposed paper become a way to think about the ways that “integrated” in design intersects with “integrated” in the ECD sector (inclusive of teachers and ECD administrators, policymakers, researchers, and other practitioners). Specifically, in design practice, “integrated” has come to mean tying together multiple elements of the building program into some type of whole that, ideally, responds to the needs of users. By contrast, “integrated” in the early childhood sector has usually referred to the synching of curriculum and services like immunization provision and social service access, or sometimes “integrated” refers to inclusive education that mainstreams learners with learning impairments. The paper is deployed to articulate notions of integration as used by designers to those held by early childhood practitioners so that the discourses inflect the other.
We ultimately argue that design and its power to spatialize makes the syncing of different conceptualizations and applications of integration in design and ECD possible. Primarily engaging design ethnography and participatory design, as well as design practice and ECD practice, the paper itself is used to analyse how the integration discourses used by designers and ECD practitioners can be used to advance ECD and the societal benefits connected to excellence in ECD education.

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O-0261

Revitalisation of an Architectural Iconic: The HVB Tower in Munich

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Keywords: High-Rise, Sustainability, Façade, Energy Refurbishment, Smart Working, LEED

The HVB Tower is a truly unique object. It is a fascinating construction and is highly appealing – a signature landmark on Munich’s skyline. Based on designs by HENN, the historically listed building by the architects Walther and Bea Betz underwent an energy refurbishment and an extensive redesigning of the interior spaces. The particular challenge lay in the precise preservation of the building’s external appearance, with a façade newly intended to fulfill the requirements of a modern, energy-efficient building envelope.

The departure point for the HENN architecture office in refurbishing the tower was that the interior, contrary to the façade, was no longer in its initial state. Due to previous modifications, there was very little original material left, leaving considerable scope for a new interpretation. This latitude was used to pay homage to the high aesthetic value of the building by means of a subtle interior-design concept derived from the building envelope and its architectural principles, while nonetheless also doing justice to its future function as a company headquarters. The resulting modern working environments meet the requirements of both sustainable corporate strategy and the digital era.

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Tuesday, 5th September, 2017

PS2-22: FUTURE _ urban theory & design 2
16:00-17:45 / 305 (3F)

O-0319

T Conceptual Parallax

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Keywords: Parallax, City, Screen, Images

In the contemporary city, the purposeful definition of a specific space has undergone a gradual liquefaction. This process, which dilutes the recognition of the main parts of the city, has made its run side by side with the affirmation of the Maison Dominò and the modern movement. If at the beginning city centers presented a uniform and distinctive building curtain - from which the identity and distinctive regionalism of a typical city stood out clear - nowadays contemporary cities are full of buildings with common features, with facades that do not reveal anything about the peculiarity of the place. The “structure” of this no-place contributed to the progressive dissolution of the clear picture that defined its
original identity. The evolution of the concept of Parallax, introduced by Steven Holl in his homonymous book, produced a concept of urban analysis borrowed from astronomical physics and implemented in historical Italian cities. Parallax, developed in Holl’s research during late 1990s and early 2000s, can nowadays be applied with even greater force and made more effective when integrated into screens and loaded with conceptual ideas offered by the “digital city” painted by Matzuda. Therefore, the new city can find new life in the synthesis of the paralaxes and the New York screens. Hyper-media and hyper-technological urban systems can thus become the external extension of the koolhaasian Junk Space; a new city of wadding and contaminated air, getting ready to reflect on its surfaces avatars of desires, projected by those who are passing through.

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O-0664

Save Our Soul: Architectural Atonement through an Urbanism of Salvation

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Keywords: Collective Awareness, Soul, Enactive Mind, Ethical Responsibility, Affordances

Even though it is hard to define specifically what the soul of the city is, the perception of its loss is tangible. Since the advent of modernism, architects and planners have become increasingly instrumental in shaping the spatial fabric of the city overtaking the informal emergent processes but has not been able to emulate the soul as such. It is crucial to question the potency of such instrumental rationality. The intuitive and synchronous realization of the loss of the soul, both by architects and citizens alike, needs to be made apparent as our ethical responsibility. Escaping the grip of modernity, and by extension, the apathy of post-modernity, architecture needs a collective act of atonement. Since the 90s, there has been radical changes in the understanding of consciousness. The Cartesian duality of body and mind has been falsified and in its place, the embodied mind necessitates a dynamic interdependence of the physical environment and the emergent consciousness. Linking such latest research with the aim to construct an interdisciplinary and transmodern narrative, the paper will postulate the ‘soul’ of the city as a collective social awareness that continuously is in a process of unfolding by the everyday actions of the citizens. As designers of human habitation, we must create affordances that allow for such participatory actions from the citizens, which in turn fosters the soul.

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O-0829

Soulful Light in Smart Cities

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Keywords: Light, Smart Cities, Urbanism, Sidewalks, Sustainability

As cities across the globe announce ambitious plans to build smart cities, what and how does urban light communicate about the city? As safety, efficiency, and sustainability dominate the rhetoric of smart cities, how could cities maintain the idiosyncrasies and nuances that characterized cities of the past? This paper examines opportunities for light in smart cities to capture and communicate ethos of their places – to be soulful as well as practical. Jane Jacobs’s analysis of city streets as the foundation of urban connectivity, as well as Umberto Eco’s notion of ‘open work’, offer lenses through which to see new possibilities in urban light. With today’s rapidly developing LEDs, light can be carefully calibrated to the dimensions and characters of each district, block, or building; it can bring out complex and diverse histories of a place, reflecting on the past while looking to the future. In the medieval European cities, pedestrians carried a lantern which not only offered a sense of safety but also identified the presence
of a soul in the darkness. Recent experimental lighting commissions in both Europe and the US suggest that light in cities could be participatory and organic, revealing souls of individuals previously represented by hand-held lanterns.

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O-0302

Dhaka the Victim of Urban Carcinogen
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Keywords: Cancer, Urbanization, Sustainable, Dhaka, Fringe

Bangladesh is gradually burgeoning as a developing country and Dhaka the capital which is changing its cityscape on a daily basis due to urbanization, either it is planned or unplanned nobody's concern, rather ostentatious and deleterious towards the society. Dhaka is enormously overpopulated due to no control on overall country population and an immense rate of migration to the capital, it is becoming totally unfit for living nowadays. This unplanned urbanization causing an extreme traffic jam and haphazard situation all around the city also this type of development across the country leads to discrimination between the capital Dhaka and other metropolitan cities and district towns close to Dhaka. In recent years to avoid a vast level of traffic, many flyovers are constructing around the city but most of these are going on without proper analysis and study. Developers and Real-estate are encroaching the rivers and wetlands of the city and in the name of beautification, government public works department closing all the sewerage line and drainage lines on the street and for these reasons Dhaka city is facing extensive waterlogging during the monsoon (May to October). Dhaka is denigrating not only among urban environmental issues but also in social issues. The city poor and marginal people becoming poorer and they are moving towards the city fringe but on the other hand, a small group of people becoming richer; this inconsistency of economy level pressing collaterally the whole city towards an imitation development. This paper will try to draw the relation between the city and its urban planning and how an unplanned urbanization able to make a city unlivable for a certain group of people. Urbanization should be a blessing towards the city but here it is rather a hostile and curse for the marginal people.

This paper is prepared on the basis of field survey, photographic analysis, empirical research and expert interviews, also the methodology based on secondary data which were collected from different published and unpublished documents, relevant research articles, and books. This paper will indicate the inappropriate apply of urbanization towards the city.

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O-0731

A New Model for Ecodesign Education
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Keywords: Eco design Education, E-education, Island Academy

Eco design education is an innovative practice in order to carry citizens to their highest creative potential. It offers open enrollment or re-entry students, students from other professions and trades, and other promising students regardless of academic background. It also offers academic credit for work in planning, design, and architectural offices.

Eco planning develops the environment; as an answer to the main problems of our environment, country and the globe are urbanization. In order to find solutions for these problems and educate the society, a
A group of professionals started to establish a foundation called ADAKADEMI Foundation in Istanbul, a very specific settlement on an Island group called Prince Islands. It is first of its kind in Turkey; Student experimentation and visionary exploration require to follow not any design ideology or convention and ADAKADEMI encourages all students to find their own personal modes of expression.

Eco design and education in an island environment for design also researched and worked in detail. For any design, interdependent system qualities found in natural systems such as Diversity, Resilience, Growth and Reclamation used as evaluation criteria. Political Science, Urbanization and Environmental Science, Green-Environmentalism and Evolutionary Planning, Architecture and Ecology, studied in tiny workshops -archive -study rooms, places that can also entertain guest researchers and also that can be used for art, music and culture conversations. In this paper, process of decision making for eco education goals discussed, and proposed a set of criteria for evaluating choices examined. Understanding networks as a context can help us identify where design and interventions will bring the maximum benefit for researchers. It is expected that this discussion may add some definition to our aspirations and help us more fully achieve them.

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Tuesday, 5th September, 2017
PS2-32: ALL _ computational design
16:00-17:45 / 310 (3F)

O-0669

Form-Based Code in Parametric Modelling:
Preserving Urban Fabric Characteristic as Soul of
Bandung, Indonesia Old City Center

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Keywords: Form-Based Code, Urban Heritage, Parametric Modelling

With the New Urbanism arising in 1980s, people began to rethink urban problems caused by rigid segregation zoning, such as the decline of pedestrian and use public transport, disappearing of public realms, damage of natural environment and decay of old city center area. Yet there are still many problems leading to a more holistic and persistent design involvement.

This paper aims to show how parametric modelling in connection with the Form-Based Code (FBC) methodology could support design development in an urban scale with the case study segment of Grote Postweg Old City Center of Bandung, Indonesia. FBC is an approach to optimize conventional zoning regulations and has been implemented by a number of cities. FBC is crucial for city development to develop main objectives, preserve urban characteristics, trends and impacts in a design process systematically and logically, while keeping the urban heritage character of the old city center. Zoning emphasizes excessively on land use and intensity control. Then FBC promotes to (re-)create and predict urban heritage environments through controlling forms. FBC develops and offers opportunities for flexible coding processes, adjustment of density and seamless public participation. Since Architecture, Engineering and Construction (AEC) Industries already have accumulated experiments by taking the idea of parametric modelling techniques, it has become clear that parametric tools could bring similar benefits to urban design projects, having even effectiveness in higher scale urban cases (Nagy, 2009).

Since FBC aims to create or recreate physical urban environment, considerable data represented space form information should be collected. In addition, FBC is a numeric-based design approach. Some
related illustrations have to be changed when values in sections are changed. That makes FBC less flexible. Parametric modelling can help FBC overcome these kind of limitations. It becomes easier for planners to update models by changing parameters in form-based coding, avoiding spending time to re-edit illustrations. Besides, sharing database to sectors is another benefit parametric modelling offers for FBC.

Parametric modelling, as a rule based, is a significant step towards urban design creating a mechanism for FBC. This paper presents the process to build a framework to connect parametric modelling with FBC processes, and how parametric modelling methodologies allow the form based coding processes to be more impeccable hence being more appropriate in the process of design flow and make sure heritage area being designed on its own soul with its own characteristics.

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O-0260
Towards Micro-Design Patterns for Sustainable Cities by Harnessing Crowd Wisdom of Citizens
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Keywords: Citizen Design Science, Citizen Engagement, Participatory Planning, Online Participation

This paper introduces a Citizen Design Science tool as a participatory planning approach. This tool integrates urban design with citizen science methodologies in order to empirically quantify design propositions. By objects in a 3D scenario, non-expert people are able to express their ideas for the open space of their neighbourhood. The tool embeds professional expertise through design constraints that guide citizens and compensates their lack of design skills. The design outcomes and the results of votes present citizens’ design preferences which are interpreted as shared consent and insights of the particular project, and becoming finally reflected in the professional design or planning. To achieve this with minimal human effort we use combined human and machine intelligence techniques.

We describe how the tool is applied for two case studies on micro-scale. The open space of the Punggol Waterway Terraces and Tampines North Park are two sites in Singapore which are about to be redeveloped. For integrating the wishes of residents, we customised our tool for these two neighbourhoods and tested it for one of the sites. We explain the challenges of this new kind of participation as well as the advantages of this tool for urban planning.

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O-0569
Parametric Pattern Prediction
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Keywords: Parametricism, Grasshopper, Simulation, Urban-Pattern, Networks

Contemporary computational methods allow designers to expand the spectrum of architectural research for urban policy through analysis. These computational analysis tools demonstrate how we are designing cities and how we might look to alternative influences. Based on scientific methods and emerging spatial tools, this paper focuses on urban pattern and formation, which will be interpreted through analysis of simulation results. Two major phenomena are driving current changes in Asian cities:
population growth and migration to cities (Weinstock, 2013). These phenomena immensely influence rapid climate and ecological change in Asia and beyond. Establishing innovative urban policy to focus on the future and improving quality of life for residents is imperative for smart growth (McCann and Ward, 2011). Based on these approaches we present a design space exploration framework for complex urban planning case studies. Seoul provides many unique scenarios and the city became a lab for case studies of pattern and formation to explore implications for social, political, economic, and spatial aspects. The investigation aims to provide computational methods for the future direction of urban design.

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O-0709

Biomimicry in Parametric Design as Generator for Climate-Responsive Architectural Design

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Keywords: Form-Based Code, Urban Heritage, Parametric Modelling

This paper aims to analyze and practice the possibility of building envelope biomimicry design with a modular form finding approach by using thermal bimetal materials in order to reduce the energy use in an existing historical building and site of Kotagede, Yogyakarta Indonesia. The energy use data will be analyzed from Energy Plus Software Simulation result after the form finding parametric design tools (with Rhinoceros and Grasshopper software) being used to generate the most effective and efficient form of thermal bimetal module, with shape vocabulary from existing heritage building. The methods used to find the most effective and efficient in terms of both form and use of materials. Meanwhile, from research and design precedent of Doris Kim Sung about thermal bimetal in 2012 this paper use thermal expansion of materials and choose two materials with extremely low and extremely high coefficient of thermal expansion to make the module bend and curl on the desirable direction.

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O-0426

Local Construction Techniques Using Digital-Fabrication with Local Wood

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Keywords: Local Production for Local Consumption, Sustainability, Digital Fabrication, CNC-Joints, Timber Structure

This study proposes a new local networking system which focuses on “local production for local consumption” by introducing low cost but high efficiency Computer Numerical Control (CNC) milling machines to small-scale lumber industries which are now decreasing in Japan. Introduction of the CNC milling machines enables the local community to produce and fabricate wood by themselves and for themselves. Since the transportation cost is the biggest obstacle for forestry, “local consumption” is a key for sustainable management. This system will minimize the transportation distance which leads to curtail of cost and lower emission of CO2. As a social implementation, we have experiment this system through an architectural project conducted by a small public facility in SAKAWA, Kochi, the prefecture in the southern part of Japan. In this experiment, we have succeeded in completing all the construction process, from material procurement to installation, within a five-kilometer radius.

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Controlling Acoustic Properties using Kinetic Surface

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Keywords: Kinetic, Acoustic Panel, Ray-tracing

Nowadays, systems like kinetic façade, that actively and efficiently adapt to the ever-changing environment are being applied to buildings. Kinetic surface, which moves and changes surface shape, has a potential as an element that can envelope a space and dynamically control the environment. As part of the environment, Sound should be considered as a part of the environment and should be controlled in various spaces, not just in concert halls. Therefore, this study aims to plan and analyze kinetic surfaces for sound control. This study conducts a simple ray-tracing simulation in accordance with the state of change in the kinetic surface. Through the distribution of that ray striking the target surface, the pattern of sound distribution in space for each transformation of the kinetic surface can be examined.

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Tuesday, 5th September, 2017

PS2-42: CULTURE _ landscape & environmental design

16:00-17:45 / 311 (3F)

Orientation and Outreach – Aligning Urban Futures a Tasmanian Case Study

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Keywords: Orientation, Geographic South, Wild Nature, Outreach

Cities on the edge of wild nature have a particular role to play in the contemporary era. In reaching out to engage with the environmental continuum they can actively fulfill what it means to be human – facilitating a shared consciousness with the natural world. While the interplay between the inhabited space of the city and the un-built beyond may be universal, the opportunity to locate oneself within these extended landscapes, from the centre of cities, is increasingly denied. Maintaining this sheltering role offered by landscape is a challenge to urban design theory and practice.

Human habitation of the landmass of Tasmania pre-dates its formation as an island. Supporting the most southerly people on the planet 40,000 years ago, today the island is identified by nearly 40% being world heritage areas and state reserves, encompassing a greater range of natural and cultural values than any other comparable region on earth. This global resource demands the process of urbanization be re-imagined.

Living in Tasmania is also to live at the southern edge of the urbanized world. In seeking coherence and harmony that arises from the rich historical layering of landscape and now cityscape, the paper counterposes the dynamic tension between the inhabited space of the city and the un-built beyond, through the case study of the capital city, Hobart.

Emerging from a body of research over several decades, and in revealing the place in which settlement
occurs, the methodology indicates how the urban morphologies, developed in response to embedded regional geo-morphologies, generates a city whose presence emerges from the shared knowledge of the terrain and the orientation it offers. From this it can also be appreciated that the ‘soul’ of all cities lies in them offering the opportunity to literally ‘know where we are’ in the world.

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O-0536

Soul Making in the Places.

The Awareness of the Archetypes in the Creative Process of Architecture

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Keywords: Place, Soul Making, Archetype, Identity, City

The research group at the School of Architecture in Siracusa, of which I belong, has carried out, in the recent years, two academic researches with the psychologist James Hillman (‘The Soul of Places’) and the director Wim Wenders (‘In the Places of the Soul’). Borrowing in architecture their studies, their interest on the soul of the places and their sensitivity towards the environment around us, their collaboration had as a common goal a new way of seeing cities and of making architecture. It means that the architecture we propose has the ethical duty of connecting the individual and collective feeling, man and the world, autobiography and sociality, by declaring and adapting the specificity of places and their bodily connection (Matter) and sentimental (Soul) with man. Drawing inspiration from work of other disciplines, the paper translates into architecture some invariants of our constructive and designing tradition, which characterize soul-making in the cities. Concrete presences in the planning of the future cities, which take into account the places and archetypal elements that can make people live better, in full compliance not only with the nature of the places, but also with the soul of the cities.

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O-0144

Identity and Soul

: Ordinary Life in Public Spaces of Paris, New York and Seoul

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Keywords: Movement, Light, Vitality, Connectivity, Community

In Plato’s Phaedo, (On the Soul) Socrates asks “What is that, when present in a body, makes it living?” The answer is “soul.” City-defining determinants go beyond the agglomeration of historic buildings to something that is living and breathing, moving and changing. Cultural monuments, vectors of movement and oases of calm raise questions about image (content of design and public perception), usage (user profile, behavior and interaction) and ideas (innovation and implementation of change). Paris, “La Ville Lumière” is defined by light. Illuminated façades of cultural palaces, including the Louvre, create a spirit of continuity, day and night, past and future, but also give a sense of the moment. Many public places transcend a repository function to offer a transformative space where use and perception of the city coexist, defining national identity and universal aspiration. New York, “the city that doesn’t sleep,” is equally defined by its cultural vitality. Museums, including MoMA, are understood through their buildings,
which become planetary moments in a universe of connection. Seoul is a special mix of traditional culture and future tech. Cheonggyecheon and Seoullo 7017, can be compared with the Promenade Plantée and the High Line, raising questions of whether continuity or discontinuity prevails.

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O-0284

The Challenges of Stakeholder Participation in Building Resilient Environment in Malaysia

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Keywords: Resilience, Disaster, Flood, Professionals, Community, Participation

The impact of disasters has been dramatically increasing over the decades. This is because communities and their assets have been more exposed to the impact of natural hazards. Malaysians are increasingly finding themselves exposed to natural disasters, mainly flooding, that results in heightened concern about citizen’s preparedness at times of disaster to protect their lives and assets. Therefore, there are a number of initiatives calling for disaster preparedness, developing a resilient city and setting principles toward a new urbanism to create a livable community for improved social well-being and the enhancement of social capital. The primary aim of this paper is to investigate how experts and professionals engage with local communities and stakeholders in Malaysia to reduce the risks and impacts of flooding.

The study shows that the Civil Defence Department of Malaysia and other NGOs are playing a vital role and have different approaches to educate the public and increase the awareness of flood mitigation measures in order to improve the resilience of the local community. However, the research shows that officials and experts still need to work with communities more before, during and after a flood event and there is a need to improve the community risk awareness for an effective flood mitigation.

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O-0859

Democratising Large-Scale Retrofitting of Housing

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Keywords: Retrofitting, Housing, Stroomversnelling, Democratising, Open Building

An enormous challenge has risen regarding our existing housing stock, as the result of ambitious agreements to reduce global carbon emissions. Until now the focus has been mostly on improving energy efficiency technically by ameliorating the energy performance of the building envelope. Insulation, controlled ventilation, new services and devices are deployed, saving and harvesting energy. New building components and production processes have been developed to smoothen obstacles in the role-out of large-scale implementation of these measures. Also effort has been put into non-technical solutions e.g. new financial arrangements, standards and business models. This has resulted in several successful pilots in the EU to retrofit dwellings towards net-zero energy levels. Still, large-scale implementation, especially targeted at owner-occupied dwellings is lagging behind. The hypothesis is that this is due to the fact that the challenge is still mainly addressed by following concepts that belong to the paradigm of the second industrial revolution. In this paradigm central coordination, proprietary development and vertical up-scaling are key and dwellers are neglected as an essential group of stakeholders in the transformation of their dwellings. This paper will reflect on the principles used in retrofitting using the successful Dutch programme of the Stroomversnelling as a case study. What are the consequences, especially for the position of dwellers, if we rethink the developments from concepts that belong to the paradigm of the third industrial revolution? In the
reflection on necessary and possible future developments experiences and insights from Open Building will be used.

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O-0411

Seductive Experience of Contemporary Shopping Environments: A Multi-sensory Perspective

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Keywords: Seduction, Multi-Sensory Experience, Contemporary Shopping Spaces, Healing Environment

Through theoretical discourses of power and multi-sensory experience, this paper traces manifestations and implications of seductive design strategies employed in contemporary shopping spaces. The premise is that seduction should not be understood as necessarily negative strategy, but rather a mode of power manifested in pleasant sensual dialogue with space ambience. On-site experiments were conducted in 4 shopping malls in Singapore and Belgrade, Serbia, comprising purposeful photo-journeys, interviews and questionnaires, sensory mapping, photo and narrative analyses. Key findings indicate that, besides consumption, shopping spaces are also perceived as pleasant settings for recreation and social interaction. Seductive experience considerably depends on quantity, intensity and arrangement of overall sensory information in space.

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Tuesday, 5th September, 2017

PS2-52: CULTURE _ varia

16:00-17:45 / 314 (3F)

O-0133

Background City: Inhabited Urban Conditions of Hong Kong

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Keywords: Background City; Urban Conditions, Urban Dialect, Hong Kong, City Inhabitation

This article explores the Background City, i.e. the everyday city we inhabit but fail to acknowledge and argues for its relevance in establishing the cultural identity of a city. The discussion focuses on the anonymous and marginal architecture of Hong Kong, a city that embodies the idea of city as background, coming into existence virtually by accident, it is today a manufactured and superimposed urban amalgam that has to constantly adapt to mitigate the hard realities of dwelling within extreme density-more than a city Hong Kong represents an urban condition.

The article further makes the case, in line with the writings of the Italian anthropologist Franco La Cecla that architects, urbanist, and planners are today no longer able to engage and appreciate the everyday urban condition, and by association have lost the capacity to observe. Within Hong Kong's invisible conditions lie the daily narratives of how citizens inhabit the city, a constellation of occupied spaces where local customs survive and form the real, as opposed to the “real estate”, living organism that is

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Hong Kong. By switching the attention from individual architectural works, the foreground city, towards a layered background, we can understand ways to categorize and transform Hong Kong’s rich urban fabric and at the same time retain its essential cultural DNA.

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O-0708

The Interpretation of Sacred Geometry Pattern of Traditional Music Arfak Papua into Architecture Space

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Keywords: Cymatic, Traditional Music Arfak, Tonoscope, Sacred Geometry, Architecture Space

By focusing on the behavior and culture of the people as a starting point and how the implications for the human perception associated with outcome of building design in the formation of a city, this research will translate the music, something that is audial, into an architecture, that are visual. Its by cymatic experiment which is a way of producing data to organize the sounds visually using tools named tonoscope.

Arfak ethnic group is a native of the Manokwar icity, West Papua, Indonesia was chosen as experimental studies, with reference to the traditional music of the tribe. The study was conducted to determine the geometric shapes from traditional music with the perception of the psychological effects of the sacred geometry. Sacred geometry used to create space with the spatial experience in architecture. Human perceptions on geometric patterns will support to resulting spatial experience of architecture for users.

It also shows lyrics has influence in psychological effects on the geometric patterns of music. We can use the positive traditional music geometry to manipulate the architectural environment of experience in urban development. Thus, we can use phenomena derived from cultural differences to be the starting point as the whole city’s soul itself.

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O-0091

Culture as a Driver for Sustainable Urban Development

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Keywords: Urbanisation, Sustainability, Culture, Driver, Liveability

The world is witnessing an inexorable mass exodus away from rural areas towards cities. Urban population has already exceeded that of rural areas and it is being acknowledged by various learnt sources that sixty-six percent of the world population will be living in urban areas by 2050. Such relentless global urbanisation will eventually trickle down to paramount stress on the environment. Nonetheless, the last three decades have been marked by a cognizance of the need for urban sustainability to circumvent any urbanisation-linked ecological cataclysm. Besides classical pillars of sustainability in terms of the i) economic, ii) social and iii) environmental dimensions of cities, the cultural dimension of metropolitan areas have been acknowledged by the United Nations as a driver for urban sustainability. This study, therefore, sets forth to highlight such a role of culture. It is found that, indeed, culture has a preponderant role to play in terms of promoting inclusiveness within culturally diverse cities in a globalised world. This inclusiveness promotes more humane societies and tap into the potential of culture as a green economy driver. Moreover, culture can revamp overlooked urban spaces and foster sustainable development through creative industries, hence promoting liveability within cities.

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O-0738

**Place-making in Mokum: Searching For the Souls of Amsterdam**

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**Keywords:** Amsterdam, Place-Making, Public Place, Sacredness, Soul

Soul can be seen as the anonymous force on which the community is built, becoming visible in the way individuals behave and act. Apart from that places, can be loaded with soul as well. Or even better: with souls -plural- since the contemporary city exists of a multitude of different cultures. For this paper three dynamic notions are connected with each other, in order to understand how the souls of the city can be understood: the notions of place-making (the human action to get from place-as-it-is towards place-as-it-can-be), of sacredness (the experience of emotive human desires being fulfilled in a multisensory way) and of souls (the anonymous forces that hold societies and cultures together). Two case-studies in Amsterdam (Artis Square and Chestnut Square) illustrate how in the interaction between place-making, sacredness and souls of the city, sacredness seem to happen and souls sometimes seem to materialize — but also how place, sacredness and souls are captured in a constant flow and cannot be fixed in stable meanings.

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O-0703

**“You Shall Get Lost in Perpa:”**

**A Phenomenological Examination of Europe’s Largest Small Business Center**

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**Keywords:** Perpa, Istanbul, Small-Scale Manufacturing, Spatial Order and Chaos

This paper attempts to undertake a phenomenological examination of Perpa’s interior space, and to understand the unique conditions which led to its success as a small business center. Located in Istanbul’s Okmeydani District and with almost 670 thousand m2 under one roof, Perpa is Europe’s largest small business center. It was born of the desire to decentralize small-scale manufacturing and trade from the Persembe Pazari area in the Karakoy District. Besides the desire to decentralize, however, Perpa was an attempt to bring order to what was perceived as a chaotic environment. Yet rather than becoming the sterilized environment that it was envisaged to be, the building gradually transformed itself into a bustling, thriving complex of myriad functions, and a collection of “user-hacked” spaces. Through an analysis of user generated data which is backed with unobtrusive observation, and correlated with newspaper articles and open-ended interviews, this article attempts to understand how the building came to be the successful business center that it is, and how it has been transformed into a complex, living, and thriving space.

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The Challenge of Conserving a Historical Building in a Changing Urban and Social Fabric: Case Study of Kurtuluş Sports Club

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Keywords: Changing Cultures, Heritage Conservation, Sports, Kurtuluş Sports Club

Kurtulus, formerly known as Tatavla, is a neighbourhood in Beyoglu, Istanbul, Turkey. The first settlement Tatavla dates to late 16th century, during the Ottoman Period. For four centuries, Tatavla/Kurtulus remained a neighbourhood that mostly housed Greek Orthodox residents. After the establishment of Turkish Republic, the Greek population in Tatavla started to decrease. After a great fire that happened in 1929, the Tatavla name was changed into Kurtulus (Salvation) for surviving the fire. During the incidents of 5-6 September 1955, many houses and stores that belonged to Greeks were damaged in riots. These resulted in a steep decrease in Greek population in the area, and new settlers started immigrating to the region from Anatolia in late 20th century. This striking change in the social fabric of the region reflected heavily on the urban texture. Kurtuluş Sports Club is one of the most important remnants of the Greek period in Tatavla/Kurtuluş. It was built as a gymnastics club, and served as a gym to the Greek schools in the area. The club building, built in 1896, survived the great fire of 1929 and the incidents of 1955. The club building itself has a special significance with its wood engraved gym and well-preserved structure. In this day, Kurtuluş Sports Club still serves as a sports club for the neighbourhood, despite the change of identity in the area. As a functioning cultural heritage building in a changing environment, the Club presents a challenge for the conservation of its architectural and intangible heritage. This study aims to conserve the historic building and its function in the changing neighbourhood without losing its identity.

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Re-Wrapped: The Library in the City of the Electronic Present

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Keywords: Library, Transparency, Digital Age, Ideology

In tandem with the protracted debate over the ramifications of the digital information technologies for the library, there has been a surprising surge in the construction of new libraries over the course of the past twenty-five years. In mark contrast to the punctured masonry frame of traditional libraries, what distinguishes many of the new libraries is their appearance as articulated volumes clad in often entirely glass. Why for the last two and half decades “permeability and transparency” of the library’s exterior envelope has been considered a requisite virtue, and not so in the many preceding decades, is the focus of this paper. Given that there is no overt programmatic, functional, or technological correlation between the incorporation of digital information technologies and the aesthetic desirability of the display-case (vitrine) approach to the outer envelope of the library, this essay examines the overlap as an ideational rather than a technological response to the unique conceptual challenges of digital information technologies. The culprit is the virtual text that brings to surface certain culturally unsettling aspects of writing that the analogue age had carefully kept under wraps and are now being, as it were, re-wrapped to the same end.

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O-0107

50 Years of Community Barefoot Architecture (CBA)

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Keywords: Barefoot, Replenishment, Community, Responsible, Relevance

This CBA paper describes how architects have contributed worldwide to assisting slum communities. Despite being financially poor, ordinary slum residents (the client) are an essential resource seeking the human right of securing, for themselves and their neighbours, safe and decent living conditions. Together with the architect enabler they weld together, as an army of positive endeavour, encouraging those in authority, particularly local government officials, to say ‘yes’ rather than ‘no’. The paper highlights the kaleidoscope of different approaches to CBA through the work of individuals (John Turner, Rod Hackney, Wu Liangyong, Amira Osman and Anna Heringer), as well as organisations (ACCA, UN Habitat, UNESCO and UIA). CBA offers replenishment opportunities for the architectural profession to provide its skills and vision to ordinary people. Acting as an in-situ catalyst, the community architect enhances slum dwellers’ opportunities to survive with dignity within their financial means. As Chawanad Luansang of ACCA explains, ‘when we use the term community architect, we have in our minds a person who is quite different than a conventional architect.’

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O-0252

The Reintroduction of Nature within Architecture and the City: The Contemporary Re-emergence of the Hortus Conclusus in the Built Environment

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Keywords: Captured Landscape, Enclosed Gardens, Hortus Conclusus, Courtyard Typology, Contemporary Urbanism

The courtyard typology is among the oldest formats of human habitat and many ancient cultures placed enclosed gardens, as abstracted and idealised recreations of the natural world and paradise, within their architecture and cities, as exemplified by the Moorish garden courtyards of the Alhambra, enclosed Japanese stone gardens, such as at Ryōan-ji, and the varying courtyard typologies of Asian houses, in which a courtyard metaphorically connects the earth with the heaven. Subsequently and most markedly in modern architecture there has been an increasing tendency to see buildings rather as objects within the landscape and in marked contrast to nature. More recently this understanding has undergone a major shift in an alternative direction and the hortus conclusus, or enclosed garden is becoming increasingly applicable to contemporary architecture, especially in urban contexts in which direct connection with landscape, or ‘nature’, is often unachievable. This paper, thus, seeks to consider the hortus conclusus, more specifically within the Asian and Australian context, from its origins to the present day in order to trace its potential relevance into the future.

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The Relevance of the Organic Tradition in Architecture in the Digital Age

Explaining the “organic disruption” of international modernism.

Exemplified by Jørn Utzon’s work.

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Keywords: Parametric design, Digital Age, Industrial Age, Mass Production, Organic Architecture, Organic Tradition in Architecture, Alvar Aalto, Louis Mumford, Eliot Noyes, Frank Lloyd Wright, Charles Eames, Eero Saarinen, Jørn Utzon

The Digital Age introduced a new wave of sculptural, organic curved architecture—often placed as iconic landmarks in the city. These buildings represent a new kind of aesthetics in contrast to the rectangular Euclidian rationalistic architecture, which has been the hallmark of the modernist architecture since Bauhaus—but they also represent a revival of the organic sculptural architecture of the middle of the twentieth century. The paper proposes that as digital technology evolves, enabling us to increasingly emulate the forms of nature within our built environment, as we see within the parametric design, it will be ever more important to know and understand our “roots” or historical cultural background in relation to organic architecture.

In order to understand the nature of this new “digital organic” language of form, we propose a study of the short but significant “analogue organic” period of architecture after the Second World War—exemplified by the work of Charles and Ray Eames, Eero Saarinen, Finn Juhl and Jørn Utzon. Even though Utzon throughout his career was always deeply focused on the humanistic aspect of functionalism, he also was, one of the architects that remained committed to industrialization and mass production; and actually developed a prefabricated system for double curved form. The same prefab-methods used in much of recent “digital organic” architecture. This paper articulates how Utzon’s major work gathers the threads from the past and actually achieves the goals at an architectural scale for a new organic form—as defined by Noyes in 1941.

This paper presents some of the factors, behind and involved in, creating his version of “new organic architecture” in the fifties—in order to make it possible to compare this with later studies of “digital organic” architecture of the twenty-first century. The relevance of returning to Mumford’s criticism of the consequences of industrialization and mass production must be seen in the perspective of today’s digitalization, prefabrication and mass production of nearly every aspect of the modern architecture and society. This research is hermeneutic in nature and its central arguments based on contemporary sources.

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Push Away the Building, Long Live, the Plants!

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Keywords: Nature, Plants, Living Tactics, Building Materiality, Decay

This paper intends to demonstrate the tactics of nature in finding its way to exist among urban fabric as man-made settings. It questions the dominant paradigm of our control towards nature in urban context that is reflected through our tendency to be defensive toward nature. In particular, this paper will discuss about plants as a form of nature that has become an indicator of the nature’s existence among us. As man-made physical entity that exist in natural setting, building is always under the course of time and nature that eventually will decay and degenerate its materiality. This could be the beginning of the plant’s
tactics as it slowly decays and degenerate man-made materials and turns them into potential living medium for plants. Then, plants start inhabiting building and being dominant over building while the buildings turn into ruins. These tactics will be revealed through the narrative and poetic reading of photographs of real settings in Old town of Jakarta that illustrates a glimpse of the plant's tactics in inhabiting building, from occupied building, unoccupied building, and up to ruins. This paper believes that in the occurrence of the plant's tactics among our built settings lies a process of understanding each other's position which will be beneficial as basis of design thinking.

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O-0693

Unconcealing Nature of Cities: The Practice of Architectural Value, if Conscious Awareness is Taken Into Account.

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Postdoctorate at Academy of Fine Arts Vienna

Keywords: Architectural practice, Spiritual Practice, Technology, Nature, Rajayoga

This paper's purpose is to outline an approach to an evolutionary transition that architecture faces via the city. The city is important in architecture's future due to well known trends. It is relevant to discuss the city in terms of its soul as place where many souls crowd together. Cities are appealing as focus of capital and spectacle, yet shiny highlights trivialize desperation and put the fabric of poverty into shadow. Our terms are that architecture is a natural inevitability of consciousness dwelling while cities' technological means conceal this. This can be unconcealed by developing practice as superordinate programme of the soul. 'Alternate cognitive knowledge' borne in spiritual practice facilitates research in architectural practice through the lens of Mind, rather than the Body. We identify architectural value as aspiration that 'questions' the purport of life against thought in relationship with conflict. "The built environment should not be completely different from the natural environment; and cities [can] be considered as a living organism, inspired by natural law" if conscious awareness is taken into account. A wide field to move past anachronistic characteristics of the profession's beginning in the dawn of modernity toward after—technology practice is revealed.'

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O-0380

An Assessment of the Use of Sustainable Building Materials - A Case Study of Caleb University

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Keywords: Sustainability, Building materials, Building construction, Material consumption

This exploratory research generally examines the term; sustainable building materials, the criteria for assessing the sustainability of building materials and the awareness of both within a study area. A building requires assembling different materials through the process of construction. Some of these materials include concrete, timber, steel, glass and so on. Energy is involved in the extraction of these raw materials, their processing and transportation from site to factory and to the construction site and their eventual placement. The rate at which these energies are consumed in view of how quickly they are replaced by nature defines sets the tone for the discussion on boundaries of sustainability. This research submits that within the environment studied there was a low level awareness on the concept
of sustainability especially among management and constructors, disregard on project lifecycle by management. An urge to adopt and domesticate international building standards by establishing an appropriate internal control unit.

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Wednesday, 6th September, 2017
PS3-21: NATURE _ urban theory & design 1
14:00-15:45 / 305 (3F)

O-0020
Integration of Traditional Community Squares as the Soul of Emerging Cities; A Study of Owerri Capital Territory, Imo State, Nigeria
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Keywords: Artistic, Community Squares, Heritage, Integration, Organic

An Community squares are informal traditional public open spaces that have survived and evolved with the people over the years from generation to generation. Components of a typical traditional community square are forest areas, green areas, foot paths, shrines, heritage and historical sites, historical artifacts, private and public buildings and hierarchy of open spaces. They are organizing systems for planning and design of traditional communities, with lots of planning theories, principles, geometric forms of interdisciplinary nature. They reveal the ingenuity of the people in artistically organizing the traditional settlements incorporating the emotions and philosophy of life of the people. But the failure of urban designers to integrate these into urban areas but instead created formal public open spaces led to disorientation, conflict with the people in Owerri urban. This research studied thirteen(13) out of thirty nine (39) community squares in four (4) of the seven (7) local government areas in Owerri capital territory, collected data through questionnaire, interview, Geographic information systems,(GIS), Geographic positioning systems,(GPS) and analysed the data qualitatively. The result shows that the integration of community squares in emerging Owerri capital is important in sustaining and reinvigorating the socio-economic, socio-cultural soul and environmental quality of the emerging Owerri capital territory.

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O-0748
Feeding Its Body, Nourishing Its Soul: the Architectural and Social Effects of Barley in the Evolution of the City of Toronto
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Keywords: Architecture, barley, planning, provisioning, Toronto

This paper focuses on the interaction between architecture, the urban form and grain flows. In particular, it looks at the North American city of Toronto, and examines buildings and neighborhoods associated to the storage, transformation, consumption and retail of barley and its by-products. The findings point to multiple usages and influences: bakeries and microbreweries are spaces of retail and socialization, while, buildings like the Canada Malting Silo and neighborhoods like the Distillery District are landmarks; together, they all contribute to the specific character of the city.
This study proceeds by identifying and visualizing the legacy of an agricultural commodity on a major, modern urban landscape. Methodologically, an inventory of buildings, structures and landscapes related to barley is created. These spaces are mapped and sites are surveyed, analyzed and digitally modeled. A new image of the city emerges defining a hitherto underexplored facet of the “soul” of Toronto.

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O-0704

**Improving the Residential Wind Environment by Understanding the Relationship between Outdoor Space Form and Ventilation potential**

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**Keywords:** Urban Design, Building Arrangements, Outdoor Ventilation, CFD Simulation

This study aimed to explore the effect of space patterns on outdoor ventilation potential. A multi-storey residential building group is investigated. To quantitatively describe the outdoor space form, Sky View Factor (SVF) and Boyce–Clark Shape Index (SI_BC) are adopted. CFD simulation method is adopted to provide wind velocity ratio of 12 wind direction (VR_12). The calculation of these indices are all processed by MATLAB program. Simulation results show that SVF generally benefits VR_12. For the South-North Space in this study, the correlation coefficient R² could reach 0.43. But, SI_BC is less related with VR_12. SI_BC is weak negative correlation with VR_12 in South-North Space. The correlation coefficient R² is only 0.03.

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O-0042

**The Struggle for the Soul of the City; Whose City? A Study of Owerri Capital Territory, Imo State, Nigeria**

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**Keywords:** City, Multidimensional, People, Soul, Struggle

The masterplan for the comprehensive development of Owerri Capital Territory did not sufficiently carry the residents along in the planning and design of the emerging capital territory. The stage therefore was set for the struggle for the soul of the city and whose city it was? The struggle encompassed environmental, physical, socio-political, socio-economic and socio-cultural aspects and more importantly that of heritage and identity. This is so because the cultural identity expresses the philosophy of life, the passion, history and heritage of the people. The paper examines these dimensions of this struggle for the soul of Owerri Capital Territory. Data were collected using Geographic Information Systems, GIS, Geographic Positioning System, GPS, questionnaires, interviews and visits. Analysis of variance and Spearman rank correlation were used to analyse the data. It was discovered that the struggle is not only real but needs a multidisciplinary and multidimensional intervention to integrate the community squares, create order and harmony in the midst of this struggle and confusion to improve the quality of life in the emerging Owerri Capital Territory.

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O-0647

Istanbul Fikirtepe Urban Regeneration Site and Recommendations through Biomimetic Architecture Design Principles

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Keywords: Biomimetic Architecture, Urban Regeneration, Carbon Emissions, Energy Efficiency

In Turkey, due to the unplanned growth of the cities and migration from urban villages to the cities, the natural resources are decreasing rapidly and the amount of greenhouse gases in the atmosphere is rising. The construction industry, which is the main driver of the Turkish economy is supported and promoted by the government. In metropolitan cities like Istanbul, the construction industry is growing rapidly due to the urban regeneration projects. Generally the preferred construction method used in conventional construction is reinforced concrete building frame. Contrary to the conventional construction techniques, an alternative architectural concept inspired by nature has been developed by “mimicking” the solutions in nature. Biomimetic architecture applies not only the natural solutions to the structure of the building but also mimics nature in terms of functionality. There are no existing biomimetic architecture examples built or designed in Turkey. The opportunity and importance of reduction of carbon emissions and energy efficiency is shown in the study by using biomimetic architectural design and materials. Due to its massive size of 1.3 million square meters of active construction area, Istanbul Fikirtepe urban regeneration project is selected for the study. A sample structure from the regeneration project is chosen and analysed by applying biomimetic architectural design principles in order to calculate the potential carbon emissions, energy and material savings. Rainwater harvesting potential, grey water recycling and reuse, wind turbine and photovoltaic system potentials are also considered and calculated. The main aspect of the study is to show the significance of the protection of natural resources and environment. It is important to understand the main cause of energy usage is buildings itself which can be reduced through biomimetic architectural design. The study indicates it is possible to achieve dramatic savings in both energy usage and carbon emission reductions as well as potable water savings by applying biomimetic philosophies to the buildings from the beginning of the design phase to the end product. Suggestions are made which can be applied to large scale urban regeneration projects worldwide.

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O-0757

Adaptive Mediation: Augmenting Urban Environmental Capacities

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Keywords: Complex Adaptive Systems, Resilience, Urban Design, Public Space, Environment

The speed and extent of urbanisation, in conjunction with resource scarcity and climate change-related stresses, present difficult challenges for architects in the future. In addressing urban spatial interventions, current design methodologies need augmentation to precisely understand the increasing complexity of the city system and unite spatial, social, political, environmental and economic dynamics more effectively. This paper posits that modelling cities as complex adaptive systems and using gamification techniques to widen participation in the design process can create comprehensive simulation design tools. This paper uses selected case study cities, all facing sustainability challenges from the unavailability of urban space to climate change induced infrastructural strain, to examine the development of the urban environmental dynamic through mapping techniques and argues for the creation of virtual platforms to aid in the urban design process. The investigation concludes that this approach to urban design
increases the adaptive capacity and sustainability of a city beyond environmental imperative to foster spaces of increased social interaction and cultural identity.

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O-0236

Cities’ invisible emotional energies:
How we shape our physical environment and how it ends up shaping us

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Keywords: Cities, Environment, Emotional Energy, Positive

Why do we love to live in cities? Is there a more meaningful attraction to living in these urban jungles? Can it be our craving for emotional fulfillment. Does the centralization of humans in urban environments generates positive emotions in us that make us more attracted to living or connecting with these places? Urban designers and architects are faced with redesigning the way we live by creating new cities or innovating old ones. In his pivotal work “The Image of the City” 1, Kevin Lynch focused on individual perception of the image of the city by examining how individuals navigate and imagine the urban landscape comparing three cities, Boston, Jersey City and Los Angeles. He always questioned in his research: “What makes one city more memorable than another?”

Based on Lynch's framework, this paper seeks to discuss the main factors that are driving the varying intensities of invisible emotional energy in three of Melbourne city’s intersection hubs: (1) Flinders Street Station and Federation Square, (2) State Library and Melbourne Central and (3) Melbourne City Baths and RMIT Design Hub. We seek to analyze why certain hubs elevate our positive energy and what we can learn from them.

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Wednesday, 6th September, 2017

PS3-31: ALL_varia(education, gender)
14:00-15:45 / 310 (3F)

O-0243

Under the Theme: Culture Under a subtitle: Built Environment Education

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Keywords: Architecture, Egypt, Built Environment Education, Children of Cairo, Children Perception of the Built Environment, Children

In a city of more than twenty million inhabitants, a percentage of children and youth around 55% of the population, and where politics, economics, ecology, cultural representation, identity, social justice, collective memory and everyday life are in upheaval, several underlying problems are undoubtedly to ensue. An inclusive socio-cultural gap between subcultures, and a largely deterioration of the built environment not only threatens the soul of Cairo for both children and adults, but also jeopardizes the
conception of our profession as means for an improved future and a better quality of life. The paper at hand argues that built environment education for children is a pivotal approach for the above-mentioned challenges. Emphasizing the urgency of architecture and children built environment education in Egypt, it aims at introducing “Architecture and Children-Egypt” program as a key pedagogical approach to tackling the urbanism of the city from a socio-cultural point of view, introducing terminology and concepts together with their associated design philosophy, elements, vocabulary and basic design skills and critical thinking approaches. The methodology of the paper is based on a quick theoretical review of Cairo’s urbanism diversity and its consequences of conflicts and challenges. Then it moves shedding lights on the children of Cairo and their perceptions and resultant attitudes towards their city as a national consequence to the urban deterioration ad the lack of shortcomings of the built environment education dilemmas. Followed by an introduction of the national program of architecture and children- Egypt; foundation, practices and outcomes. Discussion and conclusion highlight the urge of the built-environment education pedagogy as a catalyst towards a rejuvenation of the soul of our city victorious.

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O-0629

Developing Project Based Learning (PBL) for Stay-at-home Children using Minecraft

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Keywords: Minecraft, Project Based Learning (PBL), Built Environment Education (BEE), BIM

The aim of this research was to develop a project based learning (PBL), which let stay-at-home children try to rehabilitate historically important buildings and districts using Minecraft. The PBL was designed to enhance stay-at-home children's learning. The objectives of the PBL were the set of historical buildings from 1920's in the Komaba Research Campus of the University of Tokyo (Meguro-ku, Tokyo). These objectives were not listed under conservation and required careful on-site surveys to connect a real world to a Minecraft world. From the overview of stay-at-home children's learning situations, this research found out there were two typical cases. The first case was defined as a decline in children's motivation for learning and their learning ability because of their reading or writing difficulties. Children belonging to the second case were keeping their motivation and ability, having specific activities outside of school subjects, despite their reading or writing difficulties. In both cases the children could be included in the PBL and found their roles and aims to join. The improved skills of programming, online logistics and activity finding were expected according to their learning situations. More advancement of the research will be needed for enhancing stay-at-home children’s opportunities for future works.

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O-0303


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Keywords: BEE, Built Environment Education, Golden Cubes Awards, Architecture & Children

The UIA Work Programme Architecture & Children has completed the third round of Golden Cubes Awards. There were hundreds of entries and several hundreds of thousands children have participated in activities that were documented in the entries from in total 33 countries during the years. In the two first rounds there were 18 countries each participating and in the third round there was 23 countries.
The Awards are in four categories and each country can nominate one entry per category. The categories are: School, Institution, Written media and Audio-visual media.

The entries show different levels of Built Environment Education. Some are about architecture in the small scale, the children build simple models in straw, paper, wood, ginger bread, sweets etc. Others are interested in the school environment and the children are making suggestions of improvement. In other projects the children study their hometown and sometimes they are invited to participate in the real town planning process with planners and architects. UIA WP Architecture & Children’s networking and spreading of the word via Golden Cubes Awards has led to great development in countries that join the network and participate in the Golden Cubes Awards. The participants learn from each other’s.

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O-0238

Women in Architecture?

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Keywords: Women, Equality, Gender Mainstreaming, Cities

This paper focuses on the findings of an international survey, devised by the authors to see what has changed in the past forty years since the publication of AD’s special issue on ‘Women in Architecture’ in 1975. This was the largest survey undertaken of its kind, publicized through 89 websites and translated into several languages including Italian, Spanish, French and Polish. The figures reveal a sharp difference in the responses from different countries which is not related to population or wealth. Russia, China and Africa were significantly under represented. Almost all the women who responded to the 2015/16 survey were under 50 years of age (98.7%) and did not have children (65.5%). After the age of 40 there is a sharp and steady decline of women in full time employment. Many women below 40 who are in full time work and do not have children believe that there is inequality because women do not take the profession as seriously as men, not because they are discriminated against.

The findings of the survey highlight serious structural institutional misogyny and opportunities for the UIA to play a significant role.

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O-0633

The Soul of Architectural and Urban Design

TERTEL, Anna*

Anna Tertel Aterier, Poland

Keywords: Complexity, Flexibility, Harmony, Sustainability, Humanity

The soul is in the philosophy of determined element of life, which decides whether human, animal and plants are living beings. The soul of the material body are elements of the structure of human existence. Plato considered the soul of the person being decisive about our behaviour and consists of three parts: the logos (mind, nous, reason), the thymos (emotion, spiritedness, masculine), the eros (appetitive, desire, feminine). Each of these parts has its place in a balanced and peaceful soul.

In architecture and urban planning, a body is the construction of buildings with the necessary elements needed for the proper functioning of the city. The rational elements are the law and the rules. The thymos factors represent lofty ideas, which are the source of image and pride. The eros factors represent elements that satisfy the temporal needs. Modern metropolises have lost humanity and excitement thus imbalance between human and artificial
drivers, body and mind, the male and female factors or between predictable and unpredictable factors. Contemporary architecture and urban planning should provoke and seek to restore the balance in terms of ecology, aesthetics, culture and security, that leads to the sustainable and harmonious development of the city. Such soul creates the alive city.

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O-0624

From Inaccessible to Flexible Space
: Housing Design from Woman with Disability’s Perspective

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Keywords: Housing Design, Universal Design, Domestic Activities, Woman with Disability

Universal design recently is recommended to meet the changing needs of various occupants at all stages of their life including disabled people. Yet, affordable housing for disabled people in developing countries are poorly documented and analyzed. In Indonesia living in poverty with low levels of education and unemployment are highly experience by disabled people and providing affordable housing is a challenge. In this condition, disabled people become more attentive with their roles and confidence to get better life. This paper seeks to trace in how disabled woman compromises and creates better space in inaccessible domestic environment that meet their daily domestic activities and needs. Observation, in depth interview, drawing sketch are employed and two cases of houses owned by disabled woman is chosen purposively. The findings show woman with disability expressed the domestic lives by maximizing space arrangement and domestic activities in housing. It is also revealed that creative arrangement and innovative thinking are importance aspects to rearrange disabling space to meet their domestic activities and being independence. Social relationship and body’s condition are likely to be influential key factors for enabling affordable housing design for woman with disability.

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O-0041

Atmosphere for creativity consists the soul of an Architecture School.

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Keywords: Soul, Architecture, School, Atmosphere, Creativity

All Architects at one time were students at an Architecture school. They spent many years in college and much of that time was spent engaging in creative processes. It is necessary to consider the students’ specific needs in designing an environment of an Arch School. This is the soul of an Architecture School. Just as without a soul the body is lifeless so is the Arch School. The writer uses a model for the creative process adapted from Sawyer’s integrated framework. Sawyer discusses eight stages of the Creative Process. A Creative environment can be defined as the space in which one does creative thinking or creative work. The paper discusses Restorative and Contemplative environments that ultimately seek to reduce stress and fatigue. These spaces seek to encourage inner focus for reflection, introspection, and contemplation by reducing environmental stimulation. Finally the paper reveals that one of the most essential elements of a successful design is openness. There need for personal interpretation of the space and personalization for a diversity of users. There must be flexibility and openness through the utilization of un-programmed space. Spaces that people can manipulate and recreate for themselves according to their imaginations are essential.

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We all make up the city. The city reflects us

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Keywords: Urban Resilience, Informal Cities, Co-Management, Social-Ecological Systems, Social Production, Habitat, Sustainability.

The city is a place that belongs to all its inhabitants, without exclusion. It is their habitat, understood as the territory where they settle, be it built or not. Cities act as social-ecological systems, ever-changing form and constantly developing like a complex, adaptive system - always different, but at the same time, always itself. The city being itself is, in essence, the result of the way of being and inhabiting of all of its population, which, at the same time, is under constant renewal, evolution and transformation based on regular and time-space interrelated adaptive cycles. This is a real fact, culturally identifiable. In the city, people inhabit it, make it productive, exchange goods, communicate with each other, enjoy it according to social conditions - both economic and cultural -, and to a particular lifestyle, characteristic of the city and of the society that inhabits it.

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Urban Spatial Growth as Complex Network Model: Focused on Xalapa city in Mexico

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Keywords: Complex System, Power-law, Complex Network Model, Space Syntax, Urban Spatial Growth

The Science of Complexity has recently attracted attention due to its ability to explain and predict the complex phenomena in the fields leading from natural to social sciences, which are unexplainable with the existing scientific theories and methodologies. Thus, applying it to architectural & urban research fields could lead to successful explanation and prediction of architectural phenomena. This study attempts to explain the process of urban spatial growth as a complex network system. For the positivistic approach to research, the time series spatial changes of xalapa city in Mexico are examined and natural growth characteristics are prominent. The results show that the urban spatial structure represented by the Axial-line network follows the power-law. Between 1776 and 1980, urban spatial development grew by preferential attachment, i.e. complex system network Growth logic. Between 2000 and 2010, urban spatial development expanded while maintaining a minimum depth in the city center, i.e. Minimum depth attachment. Between 1980 and 2000, urban spatial development grew following both logic characteristics simultaneously. With this result, it could be said urban spaces are complex adaptive systems and that uneven rules act on the formation or development of these spaces.

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O-0123

Exploring the Relationship between Land Use Right Restrictions and Wealth Inequality.

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Keywords: Wealth Inequality, Freedom, Building Codes, Local Government, African City, Land Use Rights, Planning Control

In order for a city to express its “soul” through built form, a framework must exist where real people, with real passions and real desires, are able to give direction to urban space and structure. The reality however in most cities throughout the world is that it is not the passion and energy of committed individuals (be they Architects, developers or investors) that drive the shape and form of the city. We observe rather that increasingly form is given to buildings and the spaces they frame by an anonymous set of bureaucratic procedures, codes and planning controls.

We live in a time where much of the world is emerging into greater and greater freedom. This culture of freedom permeated the US hippy movement of the sixties, South Africa’s “Freedom Struggle” of the eighties and the Arab Spring in the earlier parts of this decade. In spite of news headlines that speak of a minority reactionary backlash, the general tendency is towards freedom to choose one’s religion, sexual orientation and vocation.

It seems contradictory therefore that during this time of widespread personal freedom, we have witnessed a global tendency toward increasing state control over what individuals may and may not build on land that they own. The work of Architects, more than ever, is an almost impossible task of navigating land use rights, permits and compliances. The physical act of building too is constrained by state imposed controls instigated by career bureaucrats and “technical experts” under the guise of “Health and Safety”. While the sustained attack on the Architect’s freedom to guide the building process is to be understood as part of a global tendency toward bloated self-serving civil service, desperate to claim increasing power as an end in itself, we argue here that this should not be allowed to continue on its current trajectory without exposure to the spotlight of academic scrutiny.

While this paper will contextualise itself within the global tendency away from freedom in the built environment, it will focus specifically on impact of land use rights and building controls on wealth inequality in South Africa. The paper explores the possibility of establishing a methodology that can reliably measure whether the building and land use controls currently in place represent a “nett cost” or a “nett benefit” to economy, the environment and to the community and especially to wealth inequality.

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O-0404

Architecture as a Qualifier – Latin American Architecture
or a Positive Conversational Instrument for a Much Wider International Architectural Discussion

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Keywords: Weaving, Qualifier, New Geography, Inclusive, Verb

Could we [architects] talk about Latin American Architecture? Does it really exist?

It is conventionally known that in the respected architectural setting, Latin America has constantly presented a very strong relationship between the orbit of ideas – the academic world, and the explicit realm of the construction of those ideas – the empirical arena. With the possible exception of a few isolated instances, most of the recent history of the architectural domain in the territory clearly displays some eloquent role models of the vibrant appreciation of that link. In fact, it has become very evident that this liaison has not been constructed only at a national level in each separate country.

There are countless architectural examples/events that have been further endorsing that connection pushing it to an international stage, predominantly within South American countries, outlining a more
“regional” framework.
By a resolute, solemn promise the investigation brings closer several acts of examining the strengths of architecture, as well as of experiencing its resistances. It was understood by doing that, the elements of the required new composed lexicon would maintain the focus of looking at architecture entirely as a tool of action [the qualifier], instead of looking at architecture as if it were just the same as any regular noun, able of being qualified.

The investigation describes a selected, fully open, and deep fragment, outlining conceptual and practical verifications on critical views and concrete projects, concerning the actual, extensive world of architecture in the Latin American territory, and in the first years of the new century.

It is appropiate to remark that the qualificatory condition of being a fragment is set in the project as exclusively relevant to architectural expressions of the Latin American field of architecture.

There are three distinct evidences for this claim:
1. A geographical location. This limit also means an understanding of geography not just as a natural setting. It should be understood as an action that could be translated as ‘position,’ ‘situation,’ or a set of circumstances that clearly show validation of the particular way in which a belief, a theory, or a philosophy is placed and established (the site / frame / part);
2. The significance of being modern architectural pieces as opposed from those relating to the remote past (the state / predicament), in order to help portray a more truthful locus; and
3. The unambiguous desire to belong in the contemporary world thanks to the precise facts of the ‘here and now’ (the present time).

Regarding the character of the elements that compose the investigation, it would be apposite to call the whole work an opus. It could be explained this way: it is like a large umbrella that covers many subject and separate pieces. At the same time, it focuses in detail, like a zoom lens, on a purposive structure.
In that structure it does not matter if the works are large or small; the tangible sizes of the architectural pieces in display –dimension, scale and other traits, are not the sole important ones, every aspect is considered as a relative magnitude instead. The stance I adopt in this research is centered in becoming a positive conversational instrument for a much wider international architectural discussion.

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O-0457
Evaluation Method for Wooden Buildings Disassemblability and Case Verification

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Keywords: Wooden Buildings, Building Disassembly, Disassemblability, Evaluation Index, Evaluation Method

Considering the problem of architecture design from the perspective of the whole life cycle of a building is essential under the background of requirements for greener building and circular economy, and the concept of design for disassembly extends the dimension of architecture design. Since the wooden building has the typical features of disassembly, it is necessary to introduce the concept of disassembly at the beginning of the design phrase, aiming to improve the utilization rate of timber and to obtain greater comprehensive benefits which is particularly meaningful in China being lack of timber resources. This paper takes the disassemblability evaluation method in the field of products design as a reference. Firstly, the disassemblability evaluation indexes of the wooden building are determined from three aspects which are technicality, economy and green. Then, the weight of each evaluation index is calculated through the questionnaire, Delphi method combined with analytic hierarchy process. Based on the above research results, this paper presents an approach to quantitatively evaluate wooden buildings disassemblability by calculating the disassembly time. At last, three typical wooden building cases are selected to verify the effectiveness of the evaluation method. The research will provide theoretical support for disassembly and design optimization of wooden buildings and ultimately to achieve the goal of sustainable development of architecture.

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O-0150

The Soul of the city: Urban Memory and Heritage

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Cities have a soul. A soul made by its essential characteristics, built by its citizens. Since this soul translates the history of its urban spaces, it should not be erased. As an eternal light, it must prevail. As must its memory, which entangles with its history. Urban memory is the city itself, which keeps the marks of its constant processes of transformation and permanence. It’s a mistake to think we can freeze the urban space.

We understand the urban project as an arena which can unite different historic times, preserving the soul of the city and at the same time allowing it to move forward and keep its dynamic character. It is the urban project that can unite past, by the urban heritage, the present in its social totality. It can also unite the different social groups, by their participation in designing the city and its transformations.

The awareness of the cultural heritage, intertwined with the collective construction of urban projects that stress the importance of public spaces where people can get to know what their shared identity is can help preserve the soul of the city.

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O-0511

Caring and Liveable City:
Developing Public Infrastructure with Durban's Informal Recyclers

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Keywords: Informality, Recycling, Inclusivity, Small-scale Public Infrastructure, Resilience

Durban’s vision is to be “Africa’s most caring and liveable city by 2030”. With 70% unemployment and 25% of citizens or one million people living in informal settlements, this requires innovation and cooperation of all role-players at all scales. Local government has long recognized the informal sector’s role in poverty reduction however there has been slower response to urban management issues associated with informal waste recycling - Negative perceptions relate to littering and obstruction of public spaces with resulting marginalization of these recyclers.

A formal partnership commenced in 2012 with informal recyclers, non-profit organizations, and various municipal departments to define support for informal recycling. Research undertaken by the partnership indicated that in the Durban Inner City alone, two hundred otherwise vulnerable people derive livelihoods from selling waste to formal recycling agents. In addition to a range of short-term programs around improved numeracy and equipment, a pilot waste recycling pick-up station emerged as a practical intervention that could address multiple challenges simultaneously and had the potential to be transformative in its impacts.

The project process demonstrates how cost-effective investment in a new public infrastructure typology can contribute actively encouraging informal recycling as a part of an integrated solution to urban management, job creation and building a caring and liveable city.

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Downtown as Spirit of City and Space Centre of Cultural Heterogen Activities.
A Case Study of Solo City, Central Java Province, Indonesia

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Keywords: Cultural Activities, Downtown, Space Centre

Solo is a city which is famous as a culture city. Solo is still upholds High Javanese culture, Chinese culture and Arabic culture which is evidenced by kind of activities and building in Solo City. A Solo Downtown became a space as activities centre with economical diversity and cultural diversity. The question of this research is: what are the characters of downtown (as Central Bussiness District) in Solo City? Theoretical framework of this research is Burgess (1925) state that Central Bussiness District as a center of economic, social, culture, and politic activities. The purposes of this research is reviewing the characters of Solo downtown as a central bussiness district and reviewing the diversity of cultural activities in Solo downtown. This research uses descriptive qualitative with place mapping method. First conclusion of this research is economic activities and cultural activities as character of Solo downtown. Second conclusion is Solo downtown used as cultural activities from Javanese culture, Chinese Culture, Arabic Culture, even international culture. The cultural activities in there are (1) art and culture festival, (2) Culinary Festival. The center of economic and cultural activities is located in Slamet Riyadi Street and Sudirman Street.

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Malaysian Plan of Action for People with Disabilities 2016-2022: Way Forward

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Keywords: People with Disabilities (PwDs), Universal Design, Malaysian Plan of Action, Social responsibility, Accessibility

The objective of this paper, firstly to identify the commitment of Malaysia government towards providing good facilities, education, health, accessibility, culture, social attraction for People with Disabilities (PwDs) in society. Secondly, to review various approaches and strategies applied by the government and non-government to fulfill the intention of Malaysian Plan of Action for People with Disabilities 2016-2022. Malaysia has made a commitment under UNCRPD in 2006 and have agreed to adopt and enact laws so that persons with disabilities would have equal rights to education, employment, and cultural life; the right to own and inherit property; not be discriminated against in marriage, children; not be unwilling subjects in medical experiments. Universal Design and Social Responsibility are tightly related in term of its core subjects such as Human Rights against discrimination and specific vulnerable groups; economic, social and cultural rights; consumer issues such as access to essential services; education,
awareness and community involvement as well as technology development and access; and social investment. Social Responsibility is an ethical ideology or theory than an entity, be it an organization or individual, has an obligation to act to benefit society at large and universal design is an active agent in this process. The methodology applied for this paper by using table research and as well as secondary data based on literature review. The data will be analysed using content analysis and case studies. The contribution of this paper will give Malaysian opportunities to share their experiences with other nations on how Malaysian implementing action of plan for People with Disabilities (PwDs) for the future in relation to human rights.

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O-0824

The Role of Streets and Residential Compounds: Improvising Open Spaces in a Filipino Barangay

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Keywords: Extended families, Barangay Comembo, Third Spaces, Community, City Planning

An urban open space is an essential element in promoting interaction and strengthening community bond especially in a city where extended families and close relationships within relatives exist. In a Filipino community such as barangay, which is the smallest administrative unit, various families somehow connected to each other live on adjacent streets and residential compounds built from decades ago. As families expand, the streets and common spaces in residential compounds found new function as barangays lack public open spaces. This study focuses on how Filipinos devise their own open spaces by making streets and shared spaces a place for social gatherings, business, local community events, as well as relaxation and recreation. In collection of data, interviews and observation are conducted on streets and houses of Barangay Comembo, Makati City where extended families live and where events and gatherings take place. The study concludes that streets and shared spaces a public open space show how Filipinos improvise with limited resources and how they give importance to the culture and community values passed from one generation to another.

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O-0161

Integrated Living in A Post-Apartheid State

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Keywords: Access, Opportunity, Integration, Colonia

The objective of the abstract is to investigate how post-apartheid cities in South Africa can accommodate the under-privileged to access information and opportunity through integrated infrastructure and sharing of development concepts with township communities in South Africa. I shall be using both my lived experience in Cape Town as precedence and the concept of Broad Based Living which is a personal project under development.

Being a young black professional living, working and starting a business in the CBD area of Cape Town who can afford to pay the excessive rental, this affords me access to multiple opportunities that enable me to develop myself as a previously disadvantaged black person in South Africa. However, this opportunity is not available to the majority of the black youth in South Africa due to multiple reasons. I shall look at infrastructure whilst not neglecting other reasons like political and socio economic challenges that impact whether township youth are able to access the opportunities afforded by CBD living. I asked myself two questions: how can I give other young people in South Africa the same access
to information and services to develop themselves? How to introduce developmental infrastructure that exists in CBD areas in townships to unlock untapped economies within townships and formalize them?

The aim of Broad Based Living is to **A.** To create a hybrid residential unit that intends to intergrade majority of the property needs within the CBD and create a well-rounded rental model. (socially and economically integrated residential unit) To ensure sustainable inclusive growth, Cape Town's greater central city and surrounds needs to work towards a mixed-income residential strategy that offers a range of housing options – different tenure options, different sizes and different affordability levels. Such a residential market in turn impacts the types of formal and informal trades and retail in the area, which increases and diversifies employment options. **B.** Explore turning informal CBD areas in townships like Taxi ranks AND adjacent informal markets to create semi-formal and robust central business development areas. Investigate unique planning and design strategies to for more sustainable township economies within this context. identify economic structures that utilize the residents in Townships as major stakeholders. Have integrated business development service centers within these newly formalized hubs of business and partner with government and private sector. We must look at how we develop future cities into more inclusive places focusing on more diverse models of development in order to have more holistic and sustainable economic growth. Also the Architectural profession should acknowledge its role in future planning for better socio economic living. Most importantly black young professionals like myself must always look back and identify ways to better the environments where we come from and environments we live in. Making them more inclusive to create better and brighter futures leading to more soulful cities.

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O-0437

**On the Trail of Fatih Akin: Istanbul**

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**Keywords:** City, Cinema, Istanbul, Mapping, Fatih Akin

While strolling/wandering around cities, we unwittingly create a route, a trace on urban landscape. This invisible route holding our experiences in the city is temporally and spatially coded in our minds. In a sense, a mapping of the journey in the city is a mental emergence. Similarly, if we observe the characters in a movie that makes a journey in a city or in a place in the narrative of the film, it can be thought that film also possesses a mapping potential as well. In the process of watching a film, audience also travels with characters in the film and they can witness physical and social characteristics of those cities or places. In this study, by using this feature of cinema, these sort of virtual journeys are taken under a research via the movies of Fatih Akin, and it is aimed to determine the routes and the places of these journeys; finally representing all together in a mapping of Fatih Akin's Istanbul.

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O-0860

**UMkhumbane Heritage Place**

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**Keywords:** Regeneration, Urban, Memory, Innovation

All over the world ghettos emerge - in South Africa they are planned (Helbig 1985: translation by
Susanne Godehart - The Transformation of Townships in South Africa. Townships were developed specifically as dormitory settlements, located furthest from the CBD, to accommodate migrant African labour to work for the privileged South African’s in building and servicing their cities. The Cato Manor of Durban is such a settlement, which holds national relevance as well as global significance, as one of the world’s largest forced removals site. Similar mass removals took place in Cape Town’s District 6 (beginning 1968) and Johannesburg’s Sophiatown (1955-1963). Community uprisings, riots, subjugation and eventual emancipation form a major part of the site’s history. The heritage of the people who resisted oppression permeates through the present as a triumphal spirit of freedom. This spirit is an inspiration for the development of A Cultural Project, defining a significant sense of place which celebrates resilience of life, growth, and the transition of a community within the city of Durban.

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Wednesday, 6th September, 2017

PS3-12: NATURE _ urban theory & design 2
16:00-17:45 / 304 (3F)

O-0881

Rio Tietê, São Paulo, Brazil: from 19th to 21st Century, Challenges for Resilience

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Keywords: Urban Historiography, Urban Sustainability, Water Sanitation, Urban Resilience, Tietê River

Historical course of urban development linked to rapid industrialization phenomenon have influenced both landscape transformation and relations between water resources and society in São Paulo. Harmonious coexistence among urbanized areas and water has been a major challenge. This paper illustrates how successive sanitation plans in Tietê river have followed a car-oriented city policy which has favored urban sprawl since its implementation. Tietê river has suffered intense morphological changes together with accumulation of environmental problems that collaborate to socio-spatial segregation in urban landscape. Gradual loss of sports, recreational and fishing activities have taken place due to the conversion of this river into a rainwater and sanitary drainage channel. A sequential analysis of maps and projects of interventions carried out in this river points out the continuity of design and management practices based on a logic already surpassed by cities that aim to constitute resilient urban environments. It is time to highlight more integrated approaches of river waters and public spaces in order to achieve environmental quality and resilience in urban landscapes. This megacity still awaits for other important spheres of city life, such as cultural and social, to be added to operational functionalities related to urban water management.

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O-0216

A Survey of Korean Cities, Settlements, and Houses by East German Architects in the Late 1950s

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Keywords: East German Architects, Konrad Püschel, Hamhung, North Korea, Landscape

East German engineers who moved to the North Korean city of Hamhung in the late 1950s to help with urban reconstruction after the war damage caused in the Korean War. This paper focuses on the surveys made prior to urban planning by the East German architects, and clarifies how they understood the cities, settlements, and houses of the Korean Peninsula in the latter half of the 1950s. We analyze the contents and results of their survey on houses, settlements, and cities based on their reports and drawings. Through the analyses, following points were revealed. Konrad Püschel pointed out that the houses, settlements, and cities in the Korean peninsula were built through a close relationship with the surrounding landscape appropriate to each hierarchy, based on the results of survey by East German architects. Püschel identified the structural features of each space, wherein the boundary is determined by the surrounding mountains, with a river flowing through it. Based on these observations, Püschel concluded that the cities and settlements in the Korean peninsula are deeply rooted in the mutual relationships between the structure/form of the Korean landscape, the landscape itself, and Korean society and economy.

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O-0668

Parametric Approach for Developing Urban Green Corridor in the City of Yogyakarta, Indonesia

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Keywords: Green Corridor, Parametric, Urban Design, Urban Planning, Ecology

The rapid growth of land development in the city of Jogjakarta, Indonesia raises the obstacle for genetic flow among conservation areas and endanger the species living in it. Green corridor development is a solution for connecting one conservation area to the other conservation areas. The corridor could be developed along the street or rivers network. To find the most optimum alignment of the corridor we applied a parametric approach in urban design. The simulation involved a comparison of areas for connecting greenery areas along road network and tree patches along the river bank. Line attractor of the streets and rivers was applied to set incremental value of maximum building coverage ratio for securing the green corridor. Based on the comparison of the total area of simulated green spaces for connectivity we disclosed that the river-based urban green corridor is the most optimum solution. We also learned that the parametric design approach could be a powerful tool for assisting decision making process in a complex urban development.

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O-0149

A Study of Strategically and Comprehensively “Citizen’s Garden” in the Spain’s Cities

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Keywords: Citizen’s Garden Model, Point, Surface, Seville, Madrid

Defining a “citizen’s garden model” which can be applied in any cities all over the world is the purpose of this study. The case of Spain elaborates that its unique characteristics about the urban agricultural lands are such that the ordinary citizens independently cultivate those lands. In this study, such usage of lands was decided to be named “Citizen’s Garden”. The two main aspects, “Point” and “Surface” are to be addressed; “Point” for its suitable location and spatial composition and “Surface” for the network among them or ones and their surroundings. The city of Seville is an adequate candidate city for the “Point” study, considering that this city is with one of the most numerous citizens’ gardens in Spain. The city of Madrid has attracted attentions regarding the formation of a network among citizen’s gardens recently.

By researching the two large cities, it is possible to define the citizen’s garden model, which strategically comprises the suitable location and special composition in each area and various forms of network enable both citizen’s gardens and citizen connect each other comprehensively.

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O-0194

Enhancing Cultural Relationships through the Integration of Neglected Open Green Spaces in Owerri, Urban, Nigeria

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Keywords: Community, Cultural, Integration, Urbanisation, Green spaces

Cultural relationships in Owerri urban area have been undermined by the imposed structure and location of open green spaces. These spaces, designated by the planning authorities have been developed within the urban planning schemes. It has however, been discovered that these green spaces have been largely neglected and the cultural benefits that could have been derived by the urban residents have not been realised. Cultural relationships could be improved if these neglected green spaces are integrated into the respective neighbourhoods in which they exist. This paper studies these neglected spaces and the frequency of culturalmeetings held in the neglected spaces in the neighbourhoods. It also studies the relationship between the frequency of cultural activities as well as the existence of informal outdoor community meeting places or halls or these activities. The paper examines the neglected green spaces in 7 layouts in the old Owerri urban area. Data was collected through questionnaires, interviews, geographic information systems (GIS), and analysed using Area wise analysis of the layouts and Spearman Rho statistical tools. The paper advocates that informal meeting places should be created within the neglected green spaces thereby encouraging inter and intra cultural relationships and diversity, hence an improved quality of life for the urban residents.

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O-0268

Reimagining Sydney Harbour

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**Keywords:** urban regeneration, sustainable development, landscape, waterfronts, public space

Sydney Harbour is arguably the city's only great public space; and perhaps its most contested. This paper will elucidate how social activism, aligned with vision, public patronage and brave design interventions have shaped Sydney over 200 years into the memorable harbour city it is today. Since the 1980s however, large-scale private development facilitated by government has progressively posed major challenges. The paper highlights the need to remain vigilant if the harbour is to retain its valued status.

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Wednesday, 6th September, 2017

PS3-22: NATURE _ landscape & environmental design

16:00-17:45 / 305 (3F)

O-0567

Integrating climate change into landscape planning in Heilongjiang: Modeling the impact of climate change on species vulnerability and developing a climate-oriented planning framework

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**Keywords:** Climate Change, Landscape Planning, Modeling, Landscape Vulnerability, Climate-Oriented Framework

The achievement of sustainable landscape planning requires the incorporation of vulnerability and regeneration into long-term planning, except foundational elements. Climatic variability has significant impact on natural environment, especially on species regeneration potential, closely linking to the landscape influenced by ecosystem vulnerability. The trend of plant growth to environment change makes regeneration a crucial step for understanding species response to climate change. In this study, the utility of the developed model, tree and climate assessment (TACA), was modeled for a 47,300,000 ha landscape in Heilongjiang, China. TACA modeled current incorporating germination processes to evaluate 5 key species, with high accuracy and simulated significant responses amongst plant species to different climate scenarios. The simulation results from TACA were used to guide plant zoning, develop landscape planning strategies and formulate a climate-oriented landscape planning framework based on a better understanding of landscape vulnerability to future climatic change.

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O-0376

The Restorative Effect of Green Space to the Visually Impaired

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Keywords: Restorative, Green Space, Visual Impairment, Quality of Life, Emotional Well-being

The purpose of this paper is to assess significant green space attributes that promote restorative effect to the people with late-onset visual impairment. It is known that this group of people is exposed to the danger of decline emotional well-being and social exclusion that leads to poor quality of life (Charles, 2007; Popa et al. 2009; Swanson et al., 2012). Although there is a wealth of empirical evidence regarding the beneficial effect of green space on health and well-being, however, knowledge about how green space could benefit the group of people with disabilities particularly visual impairment is still lacking. Realizing the gap in the extant literature, it is important to identify the significant green space attributes for this group of people when using the parks in order to evaluate how green space promotes restorative benefit in terms of their emotional well-being. To explore the knowledge, the study has employed a total of seven focus groups involving 42 participants with Age-related Macular Degeneration (AMD), the eye disease that occur in later stage of life which characterised by central vision loss. The focus groups were conducted in various places in Scotland, United Kingdom. Data analysis has shown three major themes explaining the features that were significant to the participants: the green space physical attributes the management of the park and the social connections that influenced them when visiting the park. These features have contributed to a different degree of restorative effect to this group of people. The method of analysis, however, does not suggest priorities. Therefore, the findings provide insights for more research to expand the knowledge of how the visually impaired prioritised their need in the outdoor environment.

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O-0241

A Study on the Role of Park as Urban Regeneration in Korea and its Direction and Strategy for Success

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Keywords: Park, Urban Regeneration, Stimulus Theory, Urban Structure, Strategy of Urban Regeneration

It is the urban regeneration craze. In recent years, urban regeneration has become one of the topics of our country. Seoul, as well as municipalities, have been desperate to regenerate the city and spend much of its budget on urban regeneration. However, most urban regeneration projects in Korea are introducing indiscreet cases of urban regeneration in the western world. But there is something that is overlooked. Indeed, for whom should urban regeneration be done? Urban regeneration is for local residents. In other words, the subject of urban regeneration must be a local resident. However, it seems that the current situation is not local residents but local governments based on budget and performance. This is because it applies overseas cases that do not fit the region. Since the subject of urban regeneration is a local resident, the unique culture of the region, geographical environment, local history and identity should be considered. That is, in other words, the method of urban regeneration and program setting must be changed for each region. Urban regeneration, in particular, must build a strategy for the region. In other words, the method of city regeneration should be derived through the strategy by grounds and standards. Currently, municipalities are mainly planning parks as an element of urban regeneration. However, it is disappointed that there are more failed cases than successful cases. If people do not find it, it is hard to say that they have succeeded. The purpose of this study is to find out the direction and strategy for the success of park in urban regeneration in Korea. This study
adopted a case study method and collected data through case studies for case study. The purpose of this study is to derive the direction and strategy for the park’s success in urban regeneration of Korea based on stimulation theory. In the future, it will focus on examples of successful parks in urban regeneration in Korea and present basic directions and strategies for urban regeneration in Korea. The city constantly changes. It meets every moment through natural selection and adaptation like organism. Cities are disappearing and prospering after repeated growth, decline and regeneration after birth. In order to get sustainable growth, it depends on the implementation of urban regeneration to plan and implement desirable urban change. Currently, Korea tries to solve all the cases of successful urban revitalization abroad. But they are just one of the urban renewal options. The paradigm that emerged according to the demands of each age is determined according to the acceptance and execution of the demands of the times. Now, the means and methods for realizing regeneration in each region should be very diverse, and the strategy of urban regeneration in Korea should be considered. For example, the effects of urban parks and suburban parks are clearly different and different. In other words, it is not appropriate to plan the park as a method of regeneration anywhere.

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O-0069

Level, Re-Level

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Keywords: Urbanism, Landscape, Ecology, Theory

Significant innovations and intellectual rhetoric between the disciplines of urban design and landscape cultivated a savvy 21st century agenda capable of establishing public sensitivity to landscape recovery. However, many of these projects fail to recognize the necessary urban fragmentations and dismantled landscapes as participants for evolutionary growth. In order for such reclamation to occur, the materiality of our world rests on the premise of evolutionary behavior—transforming from one state to another. We are seeing the processes of the city behaving in the same manner as we find in our so-called, natural environment. The ground becomes the palimpsest of productivity moving from one stage of the process to another. For architects, the leveling of ground becomes fundamental in how we position architectural products in our environment. The leveling of land minimizes interruptions on the working plane; however, the movement of ground should responsibly plan for the consequences of traversed ground. In the city, the productivity of ground has been worked many times over, leveled and re-leveled. This paper seeks to define processes of leveling and re-leveling in the city as a critical participant in the generation for designing urban evolution.

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O-0184

Vernacular Architecture in the Tibetan Kham Area

:A Combination of Environmental Excellence and Practicality

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Keywords: Vernacular Architecture, Adaptation, Practicality, Critical Factors, High-Intensity Earthquakes

With the rapid globalization and industrialization, it exists a paradoxical situation that traditional architectures are gradually replaced by modern architectures and are in danger of disappearing in the
cities because of the lack of practical value, but these traditional architectures are cited as exemplary models of being friendly to environment. The article provides a positive case of Pekong houses in old urban areas of Ganzi town, the Tibetan Kham, China, where is a part of the transition zone between the plain and Qinghai-Tibet Plateau and therefore exists frequent and high-intensity earthquakes. Pekong houses are spontaneously built in the cities and villages by Tibetans with thousands of years and have a long-term viability to mitigate the effects of local climate and geography and to meet contemporary needs of Tibetans by a range of appropriate approaches. The focus of study is on the effective strategies that create the habitable indoor climatic condition out of Qinghai-Tibet plateau Region monsoon climate, perfectly deal with the relationship between architectures and mountainous terrain, make architectures have an excellent ability of anti-seismic by the use of locally recycled raw materials, such as earth, stone, wood, and how to make positive responses to meet the changes of contemporary social, economic and cultural attributes in Tibetan area while region-specific architectural features are inherited well. These show a deeper understanding of critical factors affecting the continuation or abandonment of traditional architectures and offer the experiences to really create a comfortable and cost-efficient living conditions for urban residents with maintaining a friendly relationship with the environment.

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O-0253

The Design Characteristics of Nature Inspired Architecture

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Keywords: New Design Source, Nature Inspired Architectures, Nature Inspired Biomimicry, Building Design Concepts

The forms, structures, systems, processes and organisms in nature have been widely assisted designers and architects in finding improved and innovative solutions. Architects have been inspired from the shape and function of nature in order to seek new design sources from natural elements in building design. A nature inspiration design gets a lot of new ideas from pictures, shapes, mechanisms or organisms that occur in nature. This research is going to find out a way to apply for nature inspired ideas, and then is analysed the existing buildings which include nature inspired techniques and designs. The nature scene offers the glimpse and innovative ideas to draw inspirations for design. When looking at trees, landscapes, flowers, animals, mountains and nature elements, architects can find unusual perspectives, visually interesting ideas, special shapes and structures, creative details and mechanisms. Nowadays the most of cities are filled of buildings similar to supermarkets or boxes, if possible, architectural designs should try to fulfil human emotion through bio-eco-friendly architecture with the beautiful scenery and intimacy as nature. When planning for the future cities, it is important to find how to satisfy our yearning for harmonious interaction with nature, and how to presence the historical character of old buildings well. All of these are related to our fundamental human feelings, can establish holistic relationships between buildings and nature for people. This study is to propose what is nature inspiration for the visual and conception building designs, and then the characteristics of innovative designs and technologies inspired by systems and organisms found in nature. The author will propose for a new retractable cable roof system for long span inspired by spider web and curved shells inspired by sea shell and egg.

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O-0305

The Perception of the Elderly Concerning Life Quality of Nursing Homes
: A Case Study of Yangpu District in Shanghai, China

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Keywords: Institutional Care, Life Quality, Subjective Perception, Dimension Structures, Sense of Institutional Setting

Taking the elderly people in Yangpu District, Shanghai as the research objects, this paper gains understanding of the perception of the elderly people towards the life quality of nursing homes, and further analyzes the structure of the dimensions of life quality perception, therefore supply suggestions for the space design and service management of nursing homes. The research findings include: 1) the positive perception of elderly about the life quality of nursing homes in Shanghai mainly includes dedicated caregiver, decreasing family burden of children, and without loneliness. The negative perception mainly refers to the high economic pressures. 2) The overall perception of elderly people about the life quality of nursing homes could be divided into 5 dimensions, namely sense of institutional setting, care service, family relationship, comfort and economic. In the above-mentioned above, sense of institutional setting has the most prominent impacts, exactly prior to the care service. From the results, the research suggest that: 1) Improving the living service quality in nursing homes and constructing nursing care insurance system. 2) Formatting daily life atmosphere in the nursing homes and avoiding the sense of institutional setting.

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O-0802

The Perception of the Elderly Concerning Life Quality of Nursing Homes
: A Case Study of Yangpu District in Shanghai, China

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Keywords: Institutional Care, Life Quality, Subjective Perception, Dimension Structures, Sense of Institutional Setting

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O-0211

Do Older Chinese Citizens Want to Live in and Get Elderly Services from Embedded Community Elderly Centers?

A Study on Older Persons’ Preferences in the Northeast of China

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Keywords: the Urban Community of China, Embedded Community Elderly Centers (ECEC), Older persons’ Preferences, Functional Requirement

The ageing populations rising at a staggering rate and this is expected to continue in the future in China. Nowadays, many Chinese urban communities show a lack of pre-designed facilities for older persons. In this case the embedded community elderly centers (ECEC) were initiated and put into practice in some cities. But there was no clear conclusion as to whether older persons had a willingness to live in ECEC, nor what kind of functional spaces they needed most. Through a questionnaire survey and interview in the northeast area of China, this study explores whether the older Chinese citizens want to live in and get elderly service from ECEC. The survey showed that 43.3% of the older persons would go to ECEC or get service there from the point of view of their physical condition. Another 43.4% of the older person held the attitude that they would consider ECEC, but not as an absolute necessity. Besides, the older persons, who were younger, having professional jobs and were in better physical condition, were more likely to accept living in an ECEC. In addition, by analyzing the functional demands of the older person for ECEC, it was observed that medical care was found to be the need most in demand. Catering, housekeeping and special rescue route were also recognized by more than two-thirds of the older persons. Since the development of the Internet plus in China, nearly three-fifths of the older persons believed that Internet calls were also essential. However, some necessary functions in other countries such as bathing, psychological counseling and holding family activities were not important for Chinese older persons. The study provides preliminary insights into the future architectural programming and design of ECEC.

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O-0505

Empirical Study on Community-based Comprehensive Aging Facility Pilot Projects in Shanghai

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Keywords: Aging in Place, Community Aging Service, Senior Facility, Community-Based Comprehensive Aging Facility

In response to the increasing population aging and changing national policy of China, Shanghai has established two new senior facility prototypes such as elderly care home, comprehensive aging service center in recent years. Typical features of these pilot facilities include community-based, comprehensive-function, and micro-scale. Although highly needed, few empirical studies on these new-type senior facilities have been carried out. This study analyzes the utilization of different types of facilities, aims to offer valid support to the design of community-based comprehensive aging facilities. From October 2015 to December 2016, the research team investigated sixteen community-based senior facilities in Shanghai. With the methods of observation, photograph and interview, as well as volunteer works, the research focused on the typical scene of public space in the facilities, and the influence of spatial functions, forms and accessibility on public space. The study reviewed that facilities in the city center had better performance than those in the suburbs. Facilities with diverse spatial functions, rich spatial forms and good accessibility were more likely encouraging for elderly to participate in communication, activities and rehabilitative exercises.

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O-0768

The Innovation of Partition Frame Unit of Home Decoration and Renovation in Taiwan

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Keywords: Partition, Decoration, Half-Unit, Hardware

This paper presents an innovation partition by introducing the concept of ‘open building’ into it and creating the following four elements: 1. Improved plywood size, 2. load-bearing problem to overcome, 3. New SEMI-BOARD SANDWICH structure, 4. hardware accessories. First, the improved plywood size is more suitable for elevator therefore it can improve the vertical moving efficiency in the high-rise building. Second, it overcomes the vertical load-bearing limit of partition by using the innovation of partition frame unit. In addition, it combines prefabricated ‘half-frame’ and ‘half-infill’ into ‘half-unit’ to substitute for drywall. The ‘half-unit’ can be assembled immediately. It even takes hydropower, air conditioning, insulation and other interoperability works into account, they can cooperate together. These ‘semi-board’ technic provides more efficient working procedure, more convenient for future maintenance. Finally, special hardware are dedicated for ‘half-unit’ that instead of screw nails or iron nails to improve working efficiency and reduce the usage of motor equipment as less as possible.

It is expected that this innovative partition method can effectively reduce energy consumption, constructional waste and wood dust, and make up the deficiencies of the application of ‘open building’ in decoration.

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O-0500

The Variation of the City Soul
: From the City Expansion of Beijing to Reveal the Relationship of the Development Plan for Elderly Facilities’ and the Migration of Elderly Population

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Keywords: City Soul, City Expansion, Elderly Facilities, Planning, Elderly Population

As the capital of China, Beijing has made great strides in city development. It's rapid expansion of urbanization known as the “expanding-pie” style, showing continuously outward expansion of the rings. As a historic city, Beijing accumulated a wealth of urban context, in which generated the people's life context, this intergenerational urban context, become important component of the city soul. However, the rapid development of the city caused lots of city problems. To solve these problem, the administration has set a series of measures in urban planning, including part of the elderly had to move to the facilities developed in the suburbs, the migration causes a sudden change of the city context. This study is based on the analysis of the relevant macro policies and the planning contents of Beijing, combined with the census work held by Beijing civil affairs system. Aim at find out the relationship between the planning of the elderly facilities and the migration of the elderly population in the urban expansion of Beijing.

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Wednesday, 6th September, 2017

PS3-41: OPEN TOPIC _ architectural theory & design 1
16:00-17:45 / 311 (3F)

O-0138

“...The Practice of Architecture is said to be Illusionary...” Is it?
Defragmentation of the Fragmentation of the Practice of Architecture

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Keywords: Architecture, Practice, Fragment, Competition, Education

The practice of architecture has been subject to significant change between the 1970's and today gradually leading towards the fragmentation of architectural services affecting building industry quality and user amenity. The resulting contraction of architectural services has caused the practice of architecture being identified “...illusionary...” resulting in the narrowing professions scope of services. This has impacted on the ability to fully utilise its skills and experience, isolating the architect from clients; the practicalities of construction; and isolating the architect from project outcomes. While the profession may not have acquiesced to the changes it has allowed itself to be subjugated and increasingly restricted to “design”, not “architecture”. There are numerous reasons that have caused this decline in the practice of Architecture. This paper attempts to expose the pressures being imposed on architects and architectural practice, their causes and the perceptions that give rise to them.

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Understanding the Space Form in Mountainous Historical District from the Perspective of Environmental Adaptability: A Case Study of Sandaoguai in Chongqing, China

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Keywords: Environmental Adaptability, Sandaoguai Historical District, Space Form

Many space studies have employed the perspective and framework of environmental adaptability, but the application in traditional architecture among mountainous historical districts in southwest China is understudied. Meanwhile, facing rapid urbanism and the challenges of transforming, our current understanding of the intrinsic relations between space forms and environment factors remains limited, which hinders further exploration of sustainable solutions. To fill the knowledge gap, this paper takes Sandaoguai (三倒拐)as an ideal case study to explore space forms from the perspective of environmental adaptability. Based on literature review and on-site field research, with combined methods of photography, measurements, and mapping and drawing, this paper conducts concrete analysis of three types of space forms according to three categories of the environment. By doing so, we reveal that the adaptability of space forms in Sandaoguai is that each kind of space form strongly correlates to a respective category of the environment, which differs from other general findings and interprets the unique identities of Sandaoguai. The discussion and conclusion in this paper leads to a better understanding of space forms in mountainous historical districts, and provides valuable references for future preservation and transformation.

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Modernization and Self-identity in the Practice of Architecture design

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Keywords: Locality, Architectural Design Course, Vernacular Architecture

Under the context of globalization, discussing the homogeneity and the heterogeneity discourse of the locality culture became the main themes in every field, and it is the same situation in the architecture profession. To preserve historic buildings is the first step. Moreover, because the historic category is the best example of the locality, traditional and historic characteristics are the direct performance of the vernacular architecture. However, pedagogically speaking, instead of only mimicking how to teach students to learn and design from a more global perspective, and to avoid a narrow localism is the key concern.

In this essay, we would incorporate the issue of locality into the architectural design course. We would like to develop a design method to take the vernacular architecture as a paradigm (or prototype). Therefore, the aim of this research has a dual purpose. Firstly, from a pedagogical view, to consider about how to arrange a studio course through the knowledge of traditional and historic architecture, and its significance for both the students and teachers. Secondly, and more importantly, is learning by participation, to observe how the study of the traditional and local vernacular buildings will transform into the nutritional essence of the students for their future design practice.

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O-0543

Traffic Infrastructure Services the City
: Study on Designing Strategies of Urban Subway Station Space
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Keywords: Subway Station, Urban Space, Design Strategy, Relationship

In recent years, the subway has become the most important public transport in many cities. As the hub of the subway operation, these stations are not only crucial parts of the whole system, but also important nodes in the city. This paper concentrates on four aspects of urban landscape, interior space, multiple function arrangement and cultural atmosphere of subway station design. Based on the field research and analysis on some of the most representative ones in cities of China, Japan and several European countries, it defines the subway stations into four different kinds according to the relationship between the stations and various urban elements. On the basis of existing practice experiences, it seeks to summarize several instructional strategies that are easy to promote, thus making contributes to the future design of urban subway station space.

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O-0627

Architectural Characteristics of Floating Building

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Keywords: Climate Change, Floating Building, Architectural Characteristics

This study aims to investigate the architectural characteristics of floating building on water comparing with those of ordinary building on land, and to suggest the reference ideas for the new building projects around the water space. Floating architecture is basically endurable to a sudden or continuous rise in water level, re-locatable & long-term usable due to mobility. Some more architectural characteristics of floating building through the case studies can be summarized as fast and low-cost construction due to prefabrication & modular design; hydrothermal energy usage, introduction of solar photovoltaic & heat energy due to easy application of various renewable energy; use of re-usable & up-cycled building material due to environmental and economical consideration; provision of landmark, viewing points & social places due to revitalization of underdeveloped area by unique design. By the way, disadvantageous aspects of floating building from water environment are to be investigated in depth and countermeasures to overcome need to be suggested through further study.

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O-0254

“Small Block Housing Patterns and Its Effects on Built Environment”

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Keywords: Built Environment, Housing Plots, Cluster, Building Codes, Comparison

Small block housing is very popular in all busy cities. Typical ways of land divisions for housing plots are more or less similar to all big cities around the world. Generally, they made a cluster of same size
plots, for example, a cluster made of 5 decimal plots, 10 decimal plots or 20 decimals plots etc. Building rules and regulations are associated with plots sizes; therefore, building height, ground coverage, open spaces etc. are almost similar in every plot on a cluster. This particular pattern has a great impact on our built environment. Microclimate and built environment on those clusters are become rigid and have less scope to improve. On the other hand, both developers and plot owners like to occupy the maximum area of land and this approach making our urban environment unhealthy and unpleasant day by day. Decoding the typical cluster systems of plotting may give another dimension to small block housing; instead of similar size plots in a cluster, a combination of different sizes of plots on one housing cluster may improve the microclimates of that area. This paper will make a comparative analysis in terms of natural light, ventilation, acoustic and visual privacy in both existing and the proposed housing clusters. Within the existing building codes and without compromising land owner’s or developer’s interest, it will search for a comfortable built environment on small block housing. So that, it would be a helpful guideline for urban designers on designing small block housings.

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Wednesday, 6th September, 2017
PS3-51: OPEN TOPIC_ architectural theory & design 2
16:00-17:45 / 314 (3F)

O-0351

Is It Brutalism or Critical Regionalism in Taiwan?
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Keywords: Brutalism, Critical Regionalism, Cultural Resistance, Architect Xiu, Zelan, Post-Colonialism

This essay has focused on Xiu Zelan’s early works during 1960-1970, placing emphasis on Taiwan’s historical development of modernization in the 1960s. This is a crucial phase in terms of how professionals strive to import the knowledge and techniques of modernist architectures, while being eager to include local historical and cultural roots into their architectural practice. Through Xiu Zelan’s works, we can observe greater varieties: the Chung-Shan Great Hall took a Chinese traditional palace as its blueprint; the Church in St. Viator Catholic High School infuses both the traditional and modernist codes; as well as the pioneers of the contemporary modernist architectures such as the library at Yilan Senior High School and the science museum at Wu Feng Elementary School. Styles of western modernist architects such as Frank Lloyd Wright, Le Corbusier, and Oscar Niemeyer can be observed. The latter two had a sense of brutalism which can also be recognized in Xiu’s works, attempting to break through the current modernist confinement. In other words, this is a process of modernist architectures entering Taiwan - which is not a blind imitation of western countries, but possesses the meaningful resistance of local cultures - which can then be viewed as the professional realization of the critical regionalism by Frampton.

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O-0526

A Study of the Relationship between Community Unit and Components of Village Community

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**Keywords:** Community Place, Community Type, Community Organizing, Village of Ttabok

Traditionally, a village community in our society has been formed through a spontaneous development process and has experienced disintegration or collision as the concept of this community has developed into the modern society. Against this backdrop, this study focuses on the development of village and the establishment of the self-sustaining community through the concept of community that has been ingrained in our society. I have conducted analysis through a differentiated approach based on community type and drawn implications accordingly. For this, I have analyzed the physical environment through spatial analysis and identification of layout characteristics as well as the systems and guidelines that may affect the village community with focus on the village of Ttabok located in Ingye-dong, Suwon-si, and examined the characteristics of the humanities and social environment in a comprehensive manner. The findings and conclusions drawn from this study are as follows. First, the concept of community is patterned in various types. Ttabok Village examined by this study started as a part of urban regeneration and went through the process of regeneration being materialized through the community before it is shown as it is today. Second, I have been able to identify a variety of approaches to urban regeneration. As shown in the village of Ttabok, one can identify such attempts as building a variety of experience facilities and creating murals against the backdrop of historic environment in the past. It adds its significance as these characteristics are based on history. Third, the village seeks to revitalize its community through base facilities. In particular, community programs through experience encourage the participation of local residents and serve as a motive for the self-sustainable local community. Fourth, the village is building up its interlinkage with the metropolitan administrative unit along with physical administrative unit by building the street of desire for walking, which is the concept of linear spatiality, along with follow-up interlinkage through the development of various physical and nonphysical contents in the region. Fifth, the community is formed through the interest and participation of village residents and the common awareness of issues in the village. When it comes to Ttabok village, these characteristics maintain a certain extent of relationship with physical administrative district units and some different sections of the village can be explained as differentiated implications according to the program.

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O-0646

Reviving with Murals: An Architectural Perspective

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**Keywords:** Consensual Street Art, Murals, Built Environment, Urban Fabric, Istanbul, Thessaloniki

This paper attempts to examine the consensual murals created in the cities of Istanbul and Thessaloniki between 2011 and 2016, and accordingly analyze the embodiment of murals in the altering appearance of the urban fabric in relation to their context. Street art and murals have been on debate for decades as a way of reflecting the emotions of those socially and politically suppressed, or the ones who have issues with the authority. Recently, they became rather commercialized and internationally popular with the works of various artists, which are sold in the art galleries or ordered for the walls of private residences. Perceived as a part of the contemporary art production, they are now visible to the locals, visitors, tourists, and international audience via the internet. This condition raises poignant debates on materiality and immateriality of the artwork, with or without the cityscape it was created into. This study aims to reveal those discrepancies about ways of generating consensual street art and murals, while...
referring to three cases in Istanbul and Thessaloniki with a special attention to the perception of the built environment and the public audience.

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O-0251

A Soul of Shanghai: the Variety of Urban Housing’s Innovative Types

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Keywords: Variety, Urban Housing, Innovative Types, Shanghai, Soul

Firstly, two incontrovertible facts about the development and construction of Shanghai urban housing since 1978 are discussed. Then, the model of a typical Shanghai residential community is found out and its six keys are stated in detail. Except for the huge quantities of “models”, fortunately in the same period a few urban housing of truly innovative types have also come into appearance. An-ting new town(2004), Chuang-zhi-fang housing(2006), Lin-gang new town price-limited housing(2015) and Long-nan-jia-yuan public rental housing(2016) are the four typical examples. Secondly, comparing these four innovative types with the much greater amount of common and similar “models” mentioned above, some ways of current Shanghai urban housing's innovation can be summerized and concluded. Moreover, this article attempts to talk about the meaning of variety from its outer appearance to its inner things. And the interaction between the variety of Shanghai and its soul can be proved and consolidated. Finally, this article tries to give some advice on the responsibilities of an architect in such a complicated environment like Shanghai. Thankfully, this paper is subsidized by the NSFC project named as <Research on Technical System of “Downtown Factory” Community-oriented Regeneration in Yangtze River Delta Region>(No. 51678412).

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O-0721

A Study on the Formation Factors and Spatial Characteristics of the Vacant Space in Residential Neighborhoods for Autonomous Development of the Region

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Keywords: the Vacant Space in Private Site, the Residential Quarter, Regional Revitalization

The focus of this research is vacant spaces that are highly accessible to the public in residential areas. Although these spaces are privately owned, they are opened to anyone inside and outside the neighborhood. The research aims to clarify the characteristics of the space composition of the vacant space that can potentially be used as a regional base. This is done through analyzing cases that are planning to revitalize the community by utilization of vacant space. In this research, the correlation between the vacant space, site, and building was analyzed based on the cases published in “Shinkenchiku”, a major Japanese architecture magazine. The classification of the collected cases follows the categorization by its ownership into “local government”, “private company”, “NPOs”, “individual”. In the case of the local government buildings and collective housings of private companies, it’s observed that even if the site area increases, the vacant space ratio appears to remain within 20~30% of the total area. In the case of individual spaces, it’s observed that the formation of the vacant spaces is influenced by the factor of scale. Lastly, in the case of the collective housings, various methods are installed to ensure privacy.

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O-0864

From Smart Living into Smart City: A Lesson from Kampung of Surabaya

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Keywords: Smart City, Smart Living, Architectural Heritage, Kampung, Surabaya

In general, smart city is equated with the use of technology and information (ICT) to make the city more effective and efficient. The concept of smart city is also targeted to improve the quality of life for its citizens as well as the local economy. Yet, this concept is questioned for its transformation to cities in developing countries. Therefore, it is equally important to understand how this concept is integrated with local creativity and innovation of city. This paper reveals the process of local innovation and creativity from local community in kampung settlement that support the concept of smart city.

This preliminary study employs method qualitatively by collecting data from field study observation and in-depth interviews. Represents the urban living settlement of Surabaya, kampung is explored because of its multiple unique characteristics, innovation of living and building the environment. The result shows the smart living of kampung can be traced from several innovative tactics, such as green and clean program for the better kampung's environment, waste system management, and preserving the historic buildings. Those innovative local tactics can be valuable as further initiative approach that supports the implementation of smart city’s concepts in the kampung of Surabaya.

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O-0555

Where and How to Locate the Soul of a City? a Search on Soul in Europe and South Korea

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Keywords: Rivers, Europe, Cities, Soul, Korea, Folk, Reunification

The problematic which is dealt with in this article mainly builds itself around this basic question: “Where is the soul of a city?” So, it can be said that this paper basically tries to solve what constitutes a city’s soul. Within this search, it leads a comparison between Europe and South Korea. In Europe, it is encountered that lots of iconic-european cities are built on both sides of a river, sometimes more. So, this paper tries to investigate if these rivers are where the essence of the cities’ souls are determined. And on the other side, in South Korea, however, it seems like the whole essence of the country’s soul [and so its cities] is somewhat suppressed by the seperation of Korean folk into South and North regions. It seems like without a total reunification of the folk, it is left impossible to determine what Korea’s soul is. This paper tries to make this comparison with bringing a differentiation between terms like ambiance, geist (as it is in the word zeitgeist), anima (as it is meant in anima mundi), psyche, pneuma, which are all related with the concept of soul of a city.

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Future / 2. Architectural Theory

P-0666 (PPS C01-1)

Study on the Characteristic of Urban Type Multi-functional Elderly Care Facility Planning For Sustainable Development

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Keywords: Elderly welfare facilities; Living environment; Aged city;

After China entering into an aged society, a series of issues such as the change of family structure and the increase of empty nest elderly have already elevated the responsibility of supporting the elderly from the family level to the social level. The growth of aging will certainly affect the structure of future cities.

This paper will combine the countermeasures of urban structure changes in the future and explore the status of the elderly living environment in the city model which takes the elderly welfare facilities as the center, laying a solid basis for the future transformation of residential areas. In this study, it takes the most serious areas of China's aging process as the research object, and carries the safety, convenience and environment as the core of the elderly leisure behavior with the adoption of some methods such as investigation, assessment and statistics. It has been sorted out the the elderly 's living environment consciousness is insufficient and thus provides references for the design on the suitable living environment in the future.

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P-0324 (PPS C01-2)

Commercial Buildings Interior Interaction Design Based on Virtual Reality Technology

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Keywords: virtual reality; interactive; commercial buildings; interior design

In modern, under the background of experience economy, the value of the commercial buildings' sensory experience and mind-identified are becoming obvious. And collaborative commercial formats become an important demand for consumer behavior. This thesis uses technical of virtual reality to simulation the threedimensional dynamic scenes and entity behavior for commercial complex design. This paper attempts to collect and analyze the data by spatial selection, action path and sensory feedback to summarize the main factors of user’s behavior in commercial space. Analysis of the underlying causes and then to scheme evaluation and design optimization, in order to improve the effectiveness and prospect of interior design of commercial buildings, make it be a building with a sense of happiness that meets the user's behavioral psychology.

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Future / 3. Architectural Planning and Design

P-0832 (PPS C02-1)

Pop-up Home: Distributing Space of Home and Intimacy in a City

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Keywords: Home and Intimacy, Online Platforms, Distribution, Urban Nomad

The spatial design of a home has an affinity to intimacy that might have been overlooked by many practicing architects, especially those who hired by private developers in the rentier market1 that believe in building more domestic buildings is the solution to any housing crisis in a developed city. In this paper, the subject matter of housing will be discussed with a shifted focus from domestic buildings to the space of home and intimacy that scatters in a city.

In recent years, some sociologists (Illouz, 2013 & 1997; Turkle, 2013; Jamieson, 2012) have underlined a social translation of a new spatial home by analysing an intimacy in a city that has been enabled by ICT technologies; business models i.e. Airbnb and Couchsurfing also indicated a new form of dwelling by demonstrating how share-economy can assist this spatial home and, in particular, assist the distribution of it so as to assist a city dweller to find and make home without possessing a house. And yet, neither of these examples of home are designed by architects who might actually know the best about the subject matter - this space of home and intimacy. What if the critical spatial design that an architect can produce isn’t the domestic buildings but the visualisation of this space? What is this critical spatial design of the home to cope with the shifting social needs already seen? Through Jeremy Till’s way of looking at buildings and beyond - the lens of Spatial Agency (2011) - the paper will further speculate these examples of home by architectural writing this spatial design - this architectural writing, as Jane Rendell describes in chapter of Essay Collections of Critical Architecture (2007), similarly to art-writing, “the very form of the writing itself is taken to be integral to the way in which a critic positions him/herself… The personal and autobiographical enter the debate, not in order to assert an ego criticism, but as part of an on-going political exploration of subjectivity.”

The paper will be then further discussing this new spatial production of home - a new housing typology in other words - of which the hypothesis is initially placed in the contemporary world cities (Massey, 2007) where both a growing social mobility and cultural diversity are seen and thus a shifting social definition of home for its inhabitants - an urban nomad (Gestalten & Michelle Galindo, 2015; Braidotti, 2012; Deleuze & Guattari, 1986) - as a creative user (Jonathan Hill, 2003) - by which it means an emerging anthropology who itinerates in these world cities without possessing a conventional settlement of a house or shaping their lifestyles around their biological families, nationalities or other preoccupied identities, instead, tending to find and/or make their own home through each1 individually encountered and/or chosen intimacy (Illouz, 2013 & 1997; Turkle, 2013; Jamieson, 2012), as well, how a community enabled by online platforms might be able to support them to live this lifestyle fully.

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P-0762 (PPS C02-2)

Imaginative Yards: Social Housing as Agricultural Production Network

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Keywords: Food security, social housing, urban agriculture, productive yards

To approach the subject of landscape today require complex interpretations both for the urban and architectural thinking. New rural and urban dynamics reflect on the way that we commonly understand
spatial configurations. The urban growth is not a situation of progress exactly, but it is mainly about social segregation. In cities of Third World, this urbanization has formed by uncertain territories, mostly taken by poor population. Considering this perspective in Rio de Janeiro metropolitan, this article focuses on social housing emerged in a new context, rescuing the food security's importance based on a hybrid space's configuration in the spread-out urban zones. Instead of traditional housing programs, which the housing is simply apart the territory around, this paper proposes to imagine a collaborative productive space supported by urban agriculture. By retaking the history of the first society's formations, we can inferred that it has been learning to grow food on land that cities formed. This fact ensured the permanence of humankind in territory and it notion of place. Allied with current needs, many cities are considering this to reconfigure living spaces productively and, consequently, to reinterpret dense poor regions in an urban sprawling context.

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P-0604 (PPS C03-1)

Interaction Lives and Shared Space of the Elderly and Young in Homeshare-The Case Study of Homeshare in Seoul, Korea-

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Keywords: Homeshare; The Elderly; The Young; Shared Space; Interaction Lives; Seoul, Korea

Korea will continue to face the challenge of becoming a rapidly aging society. The homeshare project was promoted by the Seoul City in 2012. The homeshare program are considered as a way to solve the young problem suffering employment poverty and the dwelling problem of the single-young because the elderly provide extra rooms with the young by low rents. The homeshare is a new living style that supports intergenerational shared lives of unrelated. The aim of this research is how the participants use the shared space and what would like to activities in homeshare. This research is case studies of homeshare in Seoul, Korea. The research interviewed 6 cases. The contents of the research are investigated the private and shared space of the elderly and young in homeshare and analyzed contents of interaction lives in shared space. The elder and the young are separated by private and shared space and the elder provides private space for the young to put personal items in the shared space. Greetings, conversation and watching television are main activities together in the living room. It is noted that much of the space is shared between them and daily life necessities are shared except the private space. It is hard to expect diverse life interchange where the unrelated young person lives together with the elder. But, home-alone-dwelling in this ageing society, "intergenerational interaction life between the elder and the young" may be proposed as new dwelling concept for the social welfare prospect.

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P-0389 (PPS C03-2)

Sustainable Renovation Strategy For Officetels in Korea

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Keywords: officetel, Korean housing, renovation strategy, urban sustainability, energy efficiency

This paper discusses how so-called officetels in Korea can be renovated in a sustainable way. A sustainable renovation strategy in terms of social, environmental and economic aspects of sustainability
is developed for an exemplary officetel building as a starting basis for sustainable renovation of officetel buildings in Korea. An officetel (a portmanteau word of „office“ and „hotel“) is a Korean building type. Officetels are multi-purpose buildings with residential and commercial units. The success of officetels can be related to the demand of people to find small-scale accommodations in livable urban areas with mixed uses and near to working places. The focus of this research is to identify the following sustainability related problems of officetels: (1) Social aspect: The regulatory framework needs to be adjusted for balanced development between residential areas and non-residential areas; (2) Environmental aspect: Officetels have a high energy demand for heating, cooling and ventilation compared with other residential building types; (3) Economic aspect: In contrast to demolition and new construction of buildings, a sustainable renovation would increase the economic value of officetel buildings with comparable low monetary investment effort. The sustainable renovation strategy for officetels would significantly contribute to sustainable urban development in the Republic of Korea.

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Future / 5. Urban Planning and Design

P-0803 (PPS C04-1)

A Brief Analysis of the Development Trends of Mass Sports Space in Contemporary Beijing

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Keywords: mass sports; urbanization; urban space; public building; Beijing

Amid the rapid urbanization, the runaway urban density and environmental degradation of China are becoming more and more serious. The construction of mass sports facilities has experienced a bottleneck, which seriously restricts residents’ needs of carrying out fitness activities. It is difficult to offer sufficient space for mass sports by simply building new sports facilities and venues. Therefore, to protect the rights of residents to enjoy fitness and maintain the sustainable development of the city, the active utilization of city open space and existing public buildings used for fitness activities has become an inevitable choice. Taking Beijing as the object of study, this paper illustrates the impact of rapid urbanization on the urban fitness activities on spatial level and discuss the development trends of mass sports space in contemporary Beijing through the display and analysis of the space cases.

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P-0619 (PPS C04-2)

Effect of Grid and Linear Urban Patterns to the Level of Mixed-Use and Diversity Level in Transit Oriented Development Areas: Parametric Application For New Urbanism

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Keywords: New Urbanism; Transit Oriented Development; Parametric; Grid; Linier

There are 10 criteria for creating a good city according to New Urbanism, including walkability, mixed-use, and diversity, where one of the intervention in this development are based on Transit Oriented...
Development. To determine the most effective implementation of TOD, we compared the application of TOD with linear and grid structures, and its suitability with new urbanism criteria. We conducted a parametric simulation of TOD in several areas of Yogyakarta, that adaptable to grid and linear structures and its influence to mixed-use and diversity. The mixed-use criterion was evaluated against the building functions potential which determined by its distance to the TOD corridor. The nearest buildings determined as mixed-use buildings, and the farthest buildings determined as residential. Meanwhile the diversity criterion was evaluated based on the diversity of shapes that occur in two categories: square and irregular. The form was generated with parametric inputs of site geometry, building setback, building coverage and floor area. We found that the simulation results disclosed the fact that the mixed-use and diversity levels in the grid pattern are greater than in the linear pattern, thus we conclude that the development of TOD with grid pattern produces more suitable urban area in the new urbanism.

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P-0528 (PPS C05-1)

Hyper-Kaleidoscopic City: Unlock the Box Towards the Formation of a Future Stress-Reducing Utopia

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Keywords: future; happiness; curvature; digital tooling; stress-reduction

“Creativity is a lot like looking at the world through a kaleidoscope. You look at a set of elements, the same ones everyone else sees, but then reassemble those floating bits and pieces into an enticing new possibility” – Rosabeth Kanter

This paper aims to visualise the future city as a hyper-kaleidoscope - arguing the possibilities of reducing the stress level of its citizens through the reformation of city design by unlocking the rigidity of the typical quadrilateral grid approach to a flexible, flowing form - via the hypothetical and extrapolative psychological analysis on projective urban images to an experimental group consisting of a diversified pedestrian respondents around the globe.

If the grids being gradually unlocked - from the straight paths, rectangular benches, square parks, and the boxy buildings - into undulating forms and curves with the ease of today's digital tooling and fabrication, will it create a beautiful positive urban pattern resulting in a stress-reducing city as a whole? This paper concludes that a non-rigid urban fabric imposes positive impact to human emotion, and such methodology by designers though at a diminutive scale could contribute as a physical mechanism towards generating a happier city for the dwellers.

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P-0497 (PPS C05-2)

The Urbanization as Generator of Happiness to the Users Irrespective of Continent or Country and Social Condition, Rescuing the Identity: Some Examples in Brazil

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Keywords: -

All the men in the world have the right to leisure in the cities where they live. In the countries of great purchasing power it is easier the urbanization to promote the wellbeing of its users, but this does not prevent that in cities with few financial resources overcome this matter through creativity. The
metodology employed to develop this subject will be: a) Analysis of the kind of urbanization and urban equipment in several continentes, according their cultures – elaboration of comparative analysis of significant examples of continentes, showing the actions that were applied to expand the quality of life of the users; b) in Brazil Perspective – Analysis of the actions of the City Council’s managres concerning the urban and Heritage Rehabilitation – some examples of actions of Brazilian city Councils with scanty financial resources will be demonstrates proving that the goal of benefiting the populationin Favela Vidigal in Rio de Janeiro with implementation of a cable car, cultural and sports space. Brazil is a country with a continental dimension and 5 Regions. Meanwhile, it happens in the big cities the search for the transformation of places in public spaces that reflects peace, harmony and relaxation. The entertainment is introduced in these spaces to suggest the users take a obliged break, as a pause in their activities. We noticed that the elements of Nature: land with the vegetation and the water has been considering and valuing in the urbanization in all continentes, because they are inherent in human life. The perception of the human being is sharper and goes toward the search of the essence of the things.

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P-0468 (PPS C06-1)

Thinking on the Significance and Transformation of the City Basin

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Keywords: City basin; City form; Urban development; Urban reconstruction; Urban design

In the background of rapid development and update of the city, comparing the changes of the living quality of residents before and after the transformation of the old city, it shows the role and significance of the city basin. The paper starts from the definition of city basin, which refers to the old area left in the developing city or the rural land swallowed into the urban fringe, with dilapidated and low buildings and low-income residents. The building image, the economy and the land exploitation level of the city basin are all at a relatively low level of the city. Then, the paper analyzes the practical significance and the long-term value of these basins in a city. The form of the city with basins is proved to match the trend of future multicenter and loose urban form in the paper. The low cost housing, low request employment, and the opportunities to develop small business in the city basin will produce aggregation effect to new urban population to push the self-motion and development of these areas. At last, the paper describes the city expansion planning with a city basin mode and the urban transformation planning of the existing city basin.

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P-0461 (PPS C06-2)

Design Strategies on Smart Long-term Care Community Planning Based on Big Data Management

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Keywords: Design strategies, long-term care community, data management, big data

This paper analyzes the shortage of current hardware endowment facilities and software pension services in China’s long-term care community, combined with the implement of “9073” pension mode. On the basis of medical collection, combined with “big data” method, the planning of smart long-term care community would use the process of data management, including the collection of site environment information data, health care data, spatial and temporal behavior data, etc. With the collected data, the medical care service needs of the elderly and the community activity space would be analyzed, to set
up the basic database, the service subsystem as well as the operation system of the information management center within the smart long-term care community based on “big data”. The objective of this paper is to have a comprehensive understanding of the needs of elderly users through the big data analysis, so that to allocate the internal service facilities and resources of the community scientifically and rationally, to create the age-friendly physical activity space and to achieve sustainable renewal of the community.

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P-0381 (PPS C07-1)

Primary Exploration on Sustainable Renovation of a University Campus Building in Korea: Focus on Energy Consumption and Energy Efficiency

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Keywords: Energy Consumption; Energy Efficiency; University Campus Building; Renovation; Sustainability

This paper discusses the primary exploration on the sustainable renovation of a university campus building in Korea (UCB), using the example of the SungKyunKwan University (SKKU) Natural Science Building (NSB) in Suwon. The focus of this research is on the analysis of the NSB as 3 parts: 1) NSB’s components, 2) Building services engineering technologies and systems of NSB, 3) NSB energy consumption for specific purposes. Based on the findings of this analysis and evaluation of the results, building and technology related renovation and improvement measures are proposed to increase the energy efficiency of the building significantly. The aim of the NSB renovation concept development is the creation of the basic conditions for the design of a net-zero energy building with integrated systems for the production of renewable energy. Furthermore, the results of this research are an important basic condition for the development of a holistic sustainable building renovation design, addressing ecological, economical and socio-cultural criteria.

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P-0335 (PPS C07-2)

Aspects of “Urban Village” in China – Case Study of LuoHe City

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Keywords: urban village, architecture, living environment, transformation direction

With the rapid development of market economy and the accelerating process of urbanization in China, the villages in the rural-urban fringe zone have gradually been included in the central city and formed the “village within a city”, which is called “urban village”, unique in Mainland China and different from the Western slums. Like other urban villages in other cities, villagers in Luohe city can freely rent their own house to migrants or people in need due to the lack of unified planning management, and even the house additional reconstruction is very common in order to obtain more rental income, thus leading to the harsh living environment with dirty environment, mixed population, poor public order and imperfect infrastructure, and limiting the urban development. Based on the previous researches and illustrated by the example of a typical urban village in Luohe city, this paper analyzes its forming causes, observes the current living environment, and investigates the residential evaluation of villagers and renters. Learning the status of the urban village from these three aspects, in order to provide the necessary information for the future transformation of an urban village.

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**P-0295 (PPS C08-1)**

The Research and Reconstruction of Small Waterfront Blocks Based on the “Blue Network” System——Taking Suzhou as an Example

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**Keywords:** Small block; Large block; Blue Network; Waterfront; Reconstruction

For urban planning in China, many difficulties have been encountered in transforming urban built-up areas into small blocks, so it is necessary to make full use of current blocks for that purpose. In water cities of Jiangnan area, “Blue Networks” are composed of water systems and relative waterfront area, which show structural and proprietary advantages in constructing small blocks. The paper takes a typical Chinese water city Suzhou as an example, launches an in-depth field investigation. The participants exhibit the way of using UCL Dethmap software of space syntax to calculate the varieties in street density, integration and choice in Suzhou New District before and after adding some “Blue Networks”. It shows that the urban block construction becomes more reasonable after “Blue Networks” are embedded. It may be a feasible and good practice to segment large blocks into small blocks with “Blue Networks” for Chinese urban planning.

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**P-0052 (PPS C08-2)**

Analysis on the Publicness of Seoul Plaza, Gwanghwamun Square, and Cheonggye Plaza For Future-Oriented Urban Governance

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**Keywords:** Public; Seoul Plaza; Gwanghwamun Square; Cheonggye Plaza; Urban Governance

Urbanites’ improved quality of life has led to a critical view towards urban governance. The network of central government, local governments, public agencies, companies, and civic groups created a new urban paradigm, shifting from physical form to intangible value. Urban people, based on experience, recognized that happiness is closely related to the public aspects of life. Such results induced the government to build Seoul Plaza, Gwanghwamun Square, and Cheonggye Plaza. Different from plazas of Europe with accumulated histories, the aforementioned public areas were established by either demolishing or transforming existing infrastructure such as a road, traffic island or overpass, into a void public space. Is it the voidness or the multi-purpose of these spaces which determines their publicness? This study, to raise this question and offer a direction, provides basic information on urban governance by identifying the current status and operations of plazas in downtown Seoul. The study first reviews previous literature on publicness, cities, and humanities, and then compares the operation methods and relevant organizations of plazas in downtown Seoul to understand their publicness. Through a comprehensive analysis, the paper aims to diagnose the operation methods and relevant organizations of plazas in downtown Seoul, and to provide a public value.

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Methodology For Developing Agent Based Energy Model Based on Occupant Behavior For Scenario Analysis Across the Domestic Community Sector

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Keywords: Integrated spatial analysis, Building Energy Efficiency, Energy model, Scenario analysis.

In this paper we developed a new integrated analysis environment in order to thoroughly analyse urban building energy patterns in cities. It is argued that cities and towns account for more than two thirds of world energy consumption. Thus, this paper explores techniques to integrate a spatial analysis environment in the field of urban building energy assessment in cites to make full use of current spatial data relevant to urban building energy consumption and energy efficiency policies. By incorporating with parametric analysis of the impact of urban form on urban energy consumption for heating and cooling, the results model is able to describe the variation of energy consumption under different energy saving scenarios. This paper first describes the basic concept for this integrated spatial analysis environment IUBEA. Then paper discusses the main functions for this new environment in detail. The focus on the non-domestic sector enables a framework that accommodates diverse set of activities and uses of buildings within an urban region. The final part shows the results from a case study of building energy assessment in Greater London.

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Evacuation Performance Improvement of Theatrical Auditorium Based on Crowd Simulation

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Keywords: Theatrical Building, Safety of Evacuation, Crowd Simulation, Egress Design, Cellular Automata

Populated theatrical buildings have strong requirements for valid evacuation design. This paper aims to study the evacuation process and improvement strategies in theatrical building by a specific object, the Harbin Grand Theater. By means of simulation in the Building EXODUS software, modification strategies are worked out from the problems found in seats configuration, as well as paths and egresses setting. At the beginning, with all related field surveys done, the research build up a simplified model for simulation, and put simulations under three kinds of crowd composition due to the differences of crowd parameters and cognitive status. The assessment and analysis is based on the evacuating times and visualization of evacuation process. The original design is eligible basically in evacuation performances. The authors propose some modifications to make it more efficiently.

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Future / 11. Others

P-0735 (PPS C10-1)

Experimental Report on Stress Management Using Sunlight that Filters through the Leaves of Trees "Komorebi" in the Bathroom Stall

- Consideration to Personal Stress Management in the Bathroom Stall Where Is Adjacent to a Public Space Like an Office -

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Keywords: Brain Wave; Stress; Komorebi; bathroom stall;

Based on the technology of the previous research, which focused on sensing human behaviors in architectural spaces, the authors were planning to build up a new system to management stress in architectural spaces. However, in order to construct this system, the authors have to propose concrete ideas to evaluate and management the human stress. However, to manage the stress of individuals in a public space, like an office, is difficult. In this study, the authors focused on the bathroom stall with "Komorebi" that is a unique Japanese word indicating the sunlight filtering through the leaves of trees. Komorebi phenomenon is said to reduce stress level. Then, the authors conducted an experiment to project Komorebi on bathroom stall and verified its effect. As a result, stress reduction effect of Komorebi was observed. Especially, subjects who often use visual content to management stress were greatly effective.

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P-0231 (PPS C10-2)

Re-Defining Courtyard to Re-Vitalize Urban Community

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Keywords: Courtyard, Court, transformation, urbanization, revitalization

Cities have attracted people for centuries. As it connects communities, markets the city gradually develops a character and vibrancy. However, the downside of city growth is that it has bad effects on the quality of life and environment. Dhaka city, a home to over 17 million people has undergone such phenomenon. Rising population and increasing housing demand have spurted the multi-storied apartment culture in Dhaka sharply. These modern apartments are inhabited by people of different socio-cultural backgrounds and values. Neighbors are becoming strangers and social degradation is occurring silently and continuously. The city is losing its life but all is not lost. The urban life in recent times is very much complex but still the way of life of urban dwellers owes much to their rural origin which is evident in their use of space. Much as the modern way of life needs to be understood it is equally important to comprehend the very space that has undergone transformation from the beginning of urbanization till now, which is the ‘rural courtyard’. Although vanishing, the courtyard is simply part of a larger process of change and the time has come to revive its values in the urban context, to revitalize the city.

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P-0816 (PPS C11-1)

The Flow’s Future - Thoughts about How the Population’s Spatial Distribution and the Transport System Affect the Dynamics of the City

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Keywords: Mobility, Urbanity, Flow, Transportation, Accessibility

Rio de Janeiro, like other Latin American metropolis, suffer from transportation problems, especially in the suburbs and in the most distant areas of the city. The situation of the South and Center zones differ in different aspects of the North and West zones, although lately, due to the great sporting events, such as the Pan American Games, the World Cup and the 2016 Olympics, received investments in several modalities of transport, facilitating, mainly, the displacement of the athletes and visitors of the city. The investment in mobility was one of the main legacies of 2016 Olympic Games. Mobility, however, don’t solve all the problems of a city like Rio de Janeiro. Thinking about Rio in the future is thinking about current dynamics, the constant flows that motivate people’s movement in space. Architects can contribute to improving the quality of urban life, especially if they imagine less unequal occupations and spaces that are more democratic and accessible to all.

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Culture / 1. Architectural History

P-0862 (PPS C11-2)

Call For the Restoration of the Traditional Chief of Moundang’s Royal Palace at City of Lere in Chad

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Keywords: soul, Lere, royal palace, restoration

Located South-west Chad and at the latitude of 9.770-degree North and longitude of 14.150-degree East, the city of Lere is the department capital of the Region of Mayo-Kebbi-Ouest. The city is also the Capital of Moundang tribe and the city hosts the residence of its sovereign the Gong (the King). The total population is estimated to reach 45 804 inhabitants in 2030. Moundang tribe represents more than 50% of the existing population. The name Léré is originated from the word moundang [léré] meaning «clay». The first quarter (where the Palace is located since 1 700) is built on a land made of clay. Is this what constitutes its soul? 129

I chose to help amend the soul of City of Lere through the restoration of this traditional chief of moundang’s royal palace. The traditional chief of moundang’s royal palace is the prototype of the habitation of the local people. It is not only the integrated part of the urban tissue of City of Lere, but also contributes to the urban dynamic of the city. The city has an unmatched wealth dwelt in its divers values. Unfortunately, it has been seriously damaged.

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The Soul of Anatolian Ottoman City

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Keywords: Ottoman city, architecture, soul, Islamic religion, morality.

Ottoman city can not be explained just an absolute mind. This art is a result of inspirations which comes to heart, so it is a divine art. In some selected times: the city wraps some states because of concentration and collision of emotions and dhikres. Ottoman city is in a state of sadness which is a branch and a result of divine love. The places gets the decency (edep) with good morality, love and understanding of protection. Foundation buildings which are made with religious or social purposes and idea of helping, creates a solidarity spirit in the architecture of the city. Having the cemeteries and the houses side by side keeps alive the idea of transience and makes the city a spiritual city. There are some Islamic symbols such as a minaret, an alem, a mihrab, cypress and a tombstone in the city memory. This is the city; family makes himself his home with his neighbors. The religion of Islam keeps together all people of city and the spirit of Tevhid (Unity) is feeled in the Ottoman city. In this city, the saints who behave as morality of Muhammediyya give a common spirit to all the Ottoman cities. In Ottoman cities, the spirit of objects permeates on the city. The cities of Ottoman people who are an agricultural society; are products of the fertile lands of Anatolia.

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Back to Nature

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Keywords: Wang Shu, Regional Architecture, Contemporary China regionalism, Xiang Shan Campus of Chinese Academy of Arts

China is the country with a long history, but architectural design of it in recent years crushed by modern socialist ideological trend, ignoring the inheritance of the traditional culture and losing local characteristics. This paper analyzes Wang Shu with his Xiang Shan campus of China Academy of Art, and studies its inheritance and thinking on Chinese regional culture. It is divided into the contact with the place and the regional of the material, the traditional regression of the archetype and the poetic nature reconstructing, the scale of the huge structure and the relative philosophy. Time of them crosses from the beginning of the 21st century to now for more than ten years, reflecting the representative of contemporary Chinese regionalism, Wang Shu's explorations and considerations: Designing a combination of traditional culture and modernization, and making the experience using functions comfortable with understanding Chinese philosophy, aesthetics, process or way of life.

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Continuity of Tradition: a Study on Qingyuan Confucian Temples

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Keywords: Qingyuan Confucian Temples; Location; Complex of Temple and Education; Cultural Core; Mass Beliefs

A Confucian temple is a significant type of cultural architecture in the traditional Chinese society. Taking the Confucian temples in Qingyuan County (including two Confucian Temples in Songyuan and Zhukou...
towns) as the research subject, the paper probes into the historical evolution of these temples and analyzes the characteristics, social values and continuation powers in all periods of Confucian Temples in Qingyuan by conducting studies on the historical records and field surveys from the perspective of architecture, history and sociology. In the imperial times, the Confucian Temple in Songyuan Town characterized by the complex of temple and education was the cultural core of the county, meeting the regulations of general Confucian temples in China and maintaining its local features in location and functional settings. In contemporary times, the traditional educational function of the Confucian Temple in Songyuan Town vanished. However, with the Confucian Temple in Zhukou Town, the sacrificial function has seen continuity up to now which is mainly affected by educational institutions and bottom-up mass beliefs.

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P-0749 (PPS C13-2)

The Butonese Traditional House Typology According to the Social Status in Buton

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Keywords: Sultanate of Buton, Traditional House, Social Status, Typology, Classification

Wolio tribe has three forms of traditional house in Sultanate of Buton between 1542 to 1960 which was classified based on social status among society. The group consist of the Sultan, Sultan officials, and the populace. All of them had similar stilt house with the knockdown construction but has the distinction of spatial spaces and architectural forms which identified the social status of its users. In 1960, Sultanate of Buton dissolved the monarchy then joined the Republic of Indonesia, the three forms of the house increasingly difficult to find its authenticity. The purpose of this study is to analyze the typologies of Buton traditional house classification based on the social status of its users and analyze the design morphology based on the rate of change and its trend. To find information about original form of the house, we conducted the observation, measurement, and interview against the descendants of the Sultan and cultural experts subsequently examined graphically and descriptively. We found that every house has a sacred space, additions space, and transformation of function spaces according to contemporary needs. We conclude that transformation is a modification of spatial spaces that maintain the basic shape of the typical architecture of Buton.

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P-0701 (PPS C14-1)

Malioboro as Soul of Yogyakarta City: Tourist Perception about Malioboro District

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Keywords: tourism; district; perception; soul of city; historical

Malioboro is a preserved district of tourism in Yogyakarta City, as an artery road that connecting between the Yogyakarta Royal Palace and the Tugu Historical monument. Malioboro is also part of the imaginary axis from Mount Merapi to the Southern Seas. In recent decades, Malioboro district has developed into a center of commerce and tourism. Until now, Malioboro last as the busiest trade district and even became the icons of Yogyakarta. Most of people say, especially the tourists that they have not been visiting Yogyakarta if they have not come to Malioboro Street. Tourists interested in visiting Yogyakarta with Malioboro as one of the main destination. They have perception that they have not come to Yogyakarta if they have not visiting to Malioboro district yet. This perception is interesting to
be further examined, to measure the level of tourist interest who come to visit Malioboro district. This study was conducted to examine the phenomena that occur in the community about the perceptions of Malioboro. This study will prove that the soul of Malioboro in Yogyakarta is formed based on the historical and cultural values that exist in the region and its attractiveness as a trading center. The research method using quantitative analysis method to measure public perceptions of Malioboro through interviews with Malioboro visitors, before and after visiting Malioboro. The survey was conducted for 30 days with selected respondents are visitors or tourists aged over 15 years. The analysis is done by looking at the qualitative data obtained to then mapped the extent to which perception of each visitor about the Malioboro district. The final results of this analysis are: Malioboro is the main tourist destination in Yogyakarta, people know and have curiosity about Malioboro from their relatives, Malioboro is the first place to visit. Those who have ever visited Malioboro are satisfied with the its condition, and the satisfaction about Malioboro makes people want to visit it again. Those five main reasons make Malioboro is regarded as the soul of Yogyakarta city.

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P-0623 (PS C14-2)

Reading on Slanted Columns on Rumah Gadang Traditional House of Minangkabau
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Keywords: Minangkabau; Rumah Gadang; Slanted Columns; Technical Function; Morphological Features

We conducted a study to determine the morphological features and structural performance of slanted columns in traditional houses of Rumah Gadang, Indonesia. The slanted columns are believed to be connected in one point below the main pillar, thus makes the structure of rumah gadang to be stronger. We studied the power distribution of the main pillar to the slanted columns and conducted technical tests from several rumah gadang to see if the columns would meet on one point by measuring the angle of each slanted columns and projected in on computer simulation. We found that the slanted columns doesn’t always met on one point but to be distributed below the main pillar. After further study we found that the function of slanted columns are not limited only to distribute the building weight, but also to stabilize the weight that occured on the building. When one side of the building receive a weight force, the structure will produce an equal reaction on the opposite direction. We conclude that the angle formed by each slanted columns would produce an irregular shape of pyramid that met under the main pillar and play big part in power distribution of the building which reinforce the structure strength.

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P-0557 (PS C15-1)

The Life - oriented Tendency of Urban Historic Block Protection :
A Case Study of Harbin Chinese-baroque Historic Block
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Keywords: Authenticity, Daily life, historic block

Life is the soul of a city. When the authenticity of architectural heritage lies in the impact of people, society, architecture and city, it needs to be real, with spatial narratives, collective memory, and
identifiable history. In face of modern urban renewal, the architectural heritage in the city should form a consumption space with some cultural and emotional clues. It should be built in a real-life narrative way, thus evoking people's collective memory and pursuing historical traces. People in the consumption of the text are related to a kind of self-pleasure. The Chinese Baroque Historic District in Harbin is a characteristic architectural heritage of the city center. It is the development and construction of Harbin in the process of the Chinese businessmen gathered at the center. It is one of the most prosperous and vigorous place of the city. Its special Chinese Baroque architectural decoration is a unique architectural style in the world. In this paper, the writer tries to explain restoration of the daily life as the main body of protection of urban architectural heritage in the protection of the application taking the Chinese Baroque historical building block protection as an example.

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P-0554 (PPS C15-2)

Location and Characteristics of Aristocratic Residences During the Late Joseon Period as Determined From Sino-Korean Records: a Case Study Using the Geonjae Historic House in Asan

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Keywords: Geonjae Historic House, Woodblock, Korean traditional architecture, Heritage

A Korean traditional house has some wooden boards attached to main buildings. Each board displays a phrase or writing conveying the family history or the use or significance of the building. Korean aristocrats used to name some buildings of their house after famous verses or writings of sages or scholars. Such various writings were inscribed on woodblocks hung on a wall of buildings. The types and location and contents of those signboards(hyeonpan: 懸板) seemed to be an important key to understand the life of the Korean aristocrats as well as the use and function of the buildings. The Korean traditional residence made multiple buildings form a single house, where each building was given its own purpose. The main components of a traditional house of Korean aristocratic household are anchae, sarangchae and other buildings. Anchae is the quarters of women and children, while sarangchae is men's quarters. As a master entertained his guests at sarangchae, it also belonged to the social and public sphere. Other buildings had different functions and features. Therefore, if the meaning and location of each woodblock are analyzed and compared between different buildings, the meaning of the location of each woodblock hung on an aristocratic house in the late Joseon period will be clarified.

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P-0508 (PPS C16-1)

Stone Versus Macuti (Straw). the Permanence of the Architecture of Ibo Island, Quirimbas, Northern Mozambique.

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Keywords: Swahili, Portuguese settlements, hybrid architecture, intangible heritage, recombinant urbanism.

The Swahili coastline, stretches nearly 3 000 km on the East African coastline from Ilha de Mozambique to Mogadishu in Somalia. Traders from the East used dhows and the monsoon winds to trade across the Indian Ocean. Arab merchants settled in these areas from the 9th Century onwards. Intermarriage with local African women was the origin of Swahili Culture with its own language.
The Portuguese settled on Ibo Island in the Quirimbas Archipelago, Northern Mozambique between the sixteenth and seventeenth century. Later there was economic domination by Indian traders and the slave trade. This cultural interchange lead to the development of a typical Swahili settlement of the Stone Town of European, Arab and Swahili influences constructed of rag coral and the Macuti Town (City of Straw). The Stone Town was occupied by higher class merchants while fishermen and farmers occupied the Macuti Town. The mosque always occupied the central space. A clear line with racial undertones separated the two types of settlements while three forts occupied strategic positions.

Mozambique gained independence from Portugal in 1975 followed by a bitter civil war. The dynamic nature of Swahili settlements can be called “recombinant urbanism”, allowing changing cultural forms and layered architectures. The Macuti Town is still a flourishing settlement while ownership disputes in Stone Town in the change of leadership have resulted in many buildings unoccupied and decaying for decades.

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P-0359 (PPS C16-2)
Research on the Restoration and Protection of the Eastern Orthodox Church in Hankou, China

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Keywords: Eastern orthodox church; Hankou; restoration; protection

The eastern orthodox church in Hankou is located in Wuhan, which is in the central part of China by the Yangtze River. As the first eastern orthodox church in China, the eastern orthodox church in Hankou is of high protection value. Dating back to the modern times, the tea traders in Hankou held worship ceremonies in the church and it once flourished according to historical materials. Moreover, the cruciform layout and the architectural form reflects its strong cultural relationship with Russia. The church is an exotic product from Russia to China with the characteristics of multi-culture, which makes the church unique. As years went by, the church gradually lost its original function and was renewed several times, which led to the missing of historical and cultural information. As a result, the restoration and protection of the church needs to be put on the agenda. In this paper, the author mainly focuses on the recent restoration of the church which is based on the old photos, archive materials, field investigation and relevant protection charters, in order to preserve the material remains and its historical environment. In this way, the historical and cultural information will be retained and continued.

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P-0348 (PPS C17-1)
Development in Kranggan as Chinese District in Yogyakarta, Indonesia

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Keywords: Chinese District, Kranggan, History, Urban Development, Historical Analysis

Yogyakarta is one of the well-known multicultural city in Indonesia. One of the prominent districts is Chinese district, often called Pecinan district, has had arisen in Yogyakarta as economic activity center, especially during Dutch Colonial period. This paper aiming to identify the Pecinan districts development and their history in Yogyakarta from historical analysis using synchronic and diachronic methods, looking from some aspects such as geographic, economic, and politic. Kranggan district and Kranggan market as economic activity center become case study of this research. The methods used in this
research are observation, interview, and literature methods, then analyze it with descriptive and visual mapping methods. Analysis divided into macro analysis and micro analysis. Conclusion from macro analysis area Kranggan is acted as secondary economic center to spread out the Chinese people from downtown by Dutch Colony and located in one axis with the Chinese districts in downtown area. From micro analysis, Kranggan district have the basic Chinese district elements, such as temple, market, residential and shop houses with Dutch Colony touch in building mass and facade.

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P-0259 (PPS C17-2)

The Historical Evolution and Regeneration of the Athletics Stadium in Modern China

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Keywords: Chinese Athletics stadium, historical evolution, multi-functional, regeneration.

Based on the comprehensive analysis about the main stadium of the national games in china which is held from 1949-2010, the research objective is to analyse the historical and transformation of the athletics stadium in china. The athletics stadium in china changes from the traditional style to modern style, from temporary site to professional standard venues, from single stadium to the sports center, from cantilever truss to the membrane structure, from domestic design to international design. It also makes exploration on the regeneration motivation of the stadium and point out the three objects of the regeneration of the athletics stadium in modern china: the athletics stadium is transformed into national fitness court or a comprehensive sports culture center, or upgraded to a more professional sports stadium. In the end it suggests several regeneration strategy of the athletics in modern china. These strategies include strengthening the composition and elasticity of the internal function space, transforming the auxiliary service space and optimizing the operation model of the sports venue and adjusting the grandstand in the athletics stadium.

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P-0249 (PPS C18-1)

Study on the Architectural Form of Traditional Ancestral Theater Buildings in Hunan During the Ming and Qing Dynasties

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Keywords: Ming and Qing Dynasties, Hunan, the Traditional Ancestral Theater Buildings, Architectural Form, Influence Factors

The traditional ancestral theater buildings played an important role in the traditional patriarchal society in China. The distribution of traditional ancestral theater buildings is relatively concentrated in the west, south and middle of Hunan. In this paper, the architectural form of the traditional ancestral theater buildings in this area is emphatically discussed in order to achieve the general rules of the overall layout, substantial elements and space construction. Moreover, a comparative study of the traditional ancestral theater buildings in Hunan and its nearby provinces like Jiangxi, Hubei and Sichuan is made to obtain the influence factors of the architectural form. In this way, some enlightenment is provided for the follow-up study of the traditional ancestral theater buildings.

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A Study on the Relationship between the Residential Space and the Space for Raise Livestock of Courtyard Dwellings in Ordos

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**Keywords:** courtyard dwellings; Ordos; spatial organization; regional characteristics

In this paper, the courtyard that in the combination mode of agriculture and animal husbandry is the main body. Through the analysis of the relationship between residential space and the space for raise livestock, summarizes the most suitable spatial organization characteristics. Hope to provide clues for create settlement sites in accordance with the characteristics of Ordos. And explore the ways of expressing regional and cultural heritage in contemporary architectural creation.

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Aner Tetragonos (ανηρ Τετραγωνος) and Arkadia of Architectural Beauty Concept

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**Keywords:** Tatarkiewicz, Vitruvianism, Arkadia, aner tetragonos(ανηρ τετραγωνος), Villeggiatura

This thesis of the ultimate question of architectural beauty has a philosophical theme. The ‘History of Aesthetics’, the possibility of this distinctive interpretation from the architectural concept of the W. Tatarkiewicz-historical development will be through ‘ancient aesthetics’ “s architectural beauty, the foundation on which the medieval Romanesque and Gothic aesthetics is the next architectural review. And the concept of the Renaissance architectural beauty of ‘modernist aesthetics’ will be find. St. Francis saw “the Most Beautiful in beautiful things”(W. Tatarkiewicz, History of Aesthetics (HA.) Ⅱ, p.290). The true basic interpretation about architectural beauty will conclude as central concept of architectural aesthetics. Such a contents will be that “How is beauty to be defined? What are its essential properties? What is its relation to goodness and to being? Is it an objective property or is it relative to a subject? How is it apprehended?”(HA. Ⅱ, p.214) As a result, the centerpiece of the architectural aesthetics concept, will be ‘aner tetragonos (ανηρ τετραγωνος)’ and Arkadia.

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Reading the Changes of Madura's Traditional Domestic Architecture Influenced by Cultural Aspects

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Keywords: Domestic traditional architecture, cultural aspects, Madura

This paper examined the relationship between people and architecture based on phenomenology approach in traditional architecture. The study is focused on traditional domestic architectural change in Madura Island influenced by socio-cultural and economic aspects. Due to time constraints, instead of conducting research longitudinally, alternatively this research uses method of comparative study refers to the method used by Rapoport and Hardy to examine the changes in Tswana traditional African architecture. In this paper, this method compares a series of traditional housing ranging from the most original to the most changed in 1997 and in 2016 which is in remote areas and closer to the original condition.

Field studies are employed in Bangkalan regency of Madura Island. Observation, sketching, photography, filed work notes, and in-depth interviews are used as research techniques to explore rich data and phenomena within the socio-cultural and environmental context. The study reveals that in remote area the traditional housing is slowly changed because the Madura's people still hold some of their cultural aspects, their local wisdom and able to integrate those aspects toward modern architectural form. In the other hand, in the transitional area, it is particularly changed and influenced by social-economic growth and rapid urban development.

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The 'Meta-Imaginary' Dubai Mall

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Keywords: Dubai; postmodernism; city identity; simulacrum; historicism

Blessed, or cursed, by the largesse of the oil industry, Dubai has been developed as a fully constructed mirage. Its given condition—the desert—allows for the city to be apparently independent from any context, enabling it to fashion, without restrictions, its own interpretation of what it should be. Amidst the frenetic rate of building construction, changes in local lifestyle and the importation of foreign customs, Dubai's historic architecture has been re-cast in new forms of traditional styles, a generalized reminder of the past, although detached from any specific chronology. Reflecting on texts by Jean Baudrillard and Frederic Jameson, this article takes the Dubai Mall to be a duplicate of the simulacrum that is the whole of Dubai. In discussing how the Mall mirrors the postmodern condition of the city, it studies the fabrication of Dubai's contemporary identity, in which representations of Western elements are combined with those of the traditional Arabian medina to establish a recognizable urban environment.

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Keywords: Daily life; local architecture; modern architecture; diversity;

Asia cities have very different culture background from western cities. A large number of modern buildings in China completely change the vernacular houses and lifestyle, even result in the disappearance of diversity. The disappearance of Hutong (a traditional residence in the north of China) reflects the danger of Chinese local buildings. Modernity in China has almost become a title of Westernization. The daily life is the fountain of spacial diversity. So that is the keyword of lasting Chinese local architecture against the modern ages. As to the new buildings, we should respect local tradition. From traditional building craftsman ship to customs, architects should combine them to modern buildings. As to historic buildings, it is positive to combine modern function or space in the buildings. The balance between local buildings and modern style lies in the rate of changing. The judgment of whether it is a suitable rate is based on keeping the traditional daily life. Daily life is also the inspiration for Chinese architects. In the intricacies of history, daily life strategies help Chinese architects preserve diversity. Through this design method, it makes the city as a humanized city with modern and local tradition.

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Does Islamic Architecture Reflect Islam (Faith)?

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Keywords: Islamic Architecture, Buildings, Faith, Mosque, Features.

Islamic Architecture is well and widely known architectural discipline in modern time. Mostly religious, royal or government buildings are known as Islamic Architecture which was developed over thousands of years in Muslim countries. Some architectural features and decorative styles are very common in those buildings which deemed that might come from some Islamic traditions. How those buildings/features became or known as Islamic is a matter to investigate. What are the relationships between Islamic Architecture and Islam? The core of religion Islam is the submission to one true God, Allah. Simplicity in life, devotion to the Creator, compassion to others, giving the preference to the afterlife, follow the guidance from Quran and Messenger etc. are the basic Islamic thoughts. This religion has particular guidelines for lifestyle; which may have an indirect connection with architecture. What guidelines of the Islamic faith have represented in Islamic Architectures? This paper will search for the relation with Islamic architecture with Islamic beliefs as well as search for the answers to above-mentioned questions. It will take some of those buildings especially religious one as a case study and analyze some major features of Mosque, search its origin, reasons for transformation to Islamic Architecture. And finally, it will try to draw an outline where those buildings or features are parallel or contrast to the faith of Islam.

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P-0199 (PPS C21-2)
The Typology Analysis of the Historical Resources Utilization in Contemporary Architectural
Design -- a Case Study of Xi’an City

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Keywords: City characteristic; Historical Resources; Typology; Contemporary Architectural Design

Since the reform and opening up, the urban construction has increased in China, but most of these constructions ignored the cities’ background where the buildings were created. The constructions in historical and cultural cities lacked the cognition or characteristic exploration of the urban history and culture, and there is little guidance on operational theory and methods to inherit urban context, leading to the homogeneous city images. In order to improve this situation, the historical resources of the city should be fully excavated and rationally utilized to continue the city context and shape the features of the city. Xi’an city, one of the famous historical and cultural cities of China, which is rich in historical and cultural heritage, has produced many excellent contemporary designs reflecting the city characteristics. It has typical and practical significance to research the methods of contemporary architectural design with the use of historical resources in the city of Xi’an. Based on the analysis of the contemporary architectural design with methods of city historical resources utilization, the historical and cultural background and architectural examples of Xi’an is studied, to explore the use of historical resources in contemporary architectural design in the term of typology. With the analysis of historical resources in city level, architecture level and detail level of Xi’an City, and drawing an iconic analogy, the application of these icons and metonymy in historical resources of architectural examples is analyzed, which can be the reference to the research and practice of contemporary architectural design.

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Culture / 3. Architectural Planning and Design

P-0868 (PPS C22-1)
Urban Regeneration Strategies in the Old Urban Area Using Empty and Deserted Houses:
Focused on Gwangju Dong-gu

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Keywords: urban regeneration, empty and deserted house, Gwangju

This study aims to present a strategy for urban regeneration utilizing deserted houses by analyzing the regional characteristics of Dong-gu, Gwangju where empty or deserted houses are densely located. Characteristics of deserted houses in Gyerim 2-dong and Seonam-dong, the selected case areas, were identified by physical, social and urban aspects, a model that was also used in previous studies on urban regeneration utilizing deserted houses. Based on this classification, concrete strategies for utilizing empty or deserted houses corresponding to the case area were suggested. Gyerim 2-dong's strategy for utilizing empty or deserted houses was focused on residents while Seonam-dong's strategy was focused on external users. A limitation of the present study is that it only includes the region of Dong-gu, Gwangju. In-depth studies on how to utilize empty or deserted houses in various areas are required in the future.

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Increasing Customer Intention to Visit Mall in Surabaya- an Architectural Perspective

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Keywords: Mall development, variable, layout, Surabaya

Currently, the mall construction increases as the growth of technology and lifestyle. As a second big city in Indonesia, Surabaya has more and more new mall constructed year by year. As a result, the competition among mall in Surabaya is very tight. More types of products are sold in every mall as one competition manifestations. Moreover, every mall has its own management that enables them to attract more customers. Mall management has more things to be considered to be able to face the mall competition. One of the important considerations of current mall management is the design of retail layout. An attractive retail layout design proved to increase customer intention to visit the mall. On the other hand, designing retail layout is not a simple job. Many variables need to be considered by the Mall developers to design an attractive retail. Problems arise since the more variable involved, the more cost and constraints resulted. Thus, the aim of this study is to identify the important variables to design an attractive retail of a mall. By identifying the important variable to design a retail, mall developers can put their effort optimally to gain the retail design to satisfy customers of the mall. One most important variable and some supporting variables will be identified to be mall developer consideration in designing an attractive mall retail optimally.

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Keywords: Industrial Building, Residential Orientation, Building Renovation, Strategy Research

In the post-industrial age, renovation for inner city industrial buildings have become an urgent issue for many cities. For renovated industrial buildings, cultural orientation has been the main strategy. Many industrial buildings are renovated into museums, art gallery, exhibition hall, creative parks and so on. However, this kind of renewal demands constant input of social resources and can be intricate to keep a sustainable operation. Berlin, with its renowned industrial history and pluralistic renovation modes, has presented us a new practical approach of dealing with its inner city industrial buildings. Many out*of*use industrial buildings in Berlin have been turned into housing or mix*use buildings that contain residential function, generating resilient, flexible, unique and creative living environment. This mode is called the residential*oriented renovation. This paper will try to understand the residential*oriented renovation in Berlin through the case of Viktoria-Quartier. Viktoria-Quartier is formerly operated as the Berlin Schultheiss Brewery. By 2014, it has been fully renovated into a residential community mixed with few offices and commerce. By reviewing its redevelopment mode and renovation design, strategies will be concluded and an assessment on project transferability will be made for future reference. This paper is subsidized by NSFC (National Natural Science Foundation of China) project and the authorized number is 51678412.

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P-0603 (PPS C23-2)

How Can Big Underground Culture Center be Accessible? : Analysis of Accessibility Utilizing Sunken Plaza in Large-scale Cultural Complex

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Keywords: Accessibility, Sunken plaza, Access facility, Asian Culture Center

The recent cultural complexes built in urban areas accommodate multiple functions and diverse events due to the large-scale block-based development and complex functions. As they have reorganized urban organization and accessible facilities, they give an effect on the users’ accessibility. The target of the study is "Asian Culture Center", which was open in 2016 in Gwangju, Korea. The Asian Culture Center was built as a multi-cultural facility on a block basis in accordance with the recent tendency to build a large-scale cultural facility, but the main buildings were placed underground and the ground was planned as a park. Unlike existing multi-purpose cultural facilities, most of the facilities are located underground, so access to facilities is only possible through vertical circulations. This approach poses problems with the accessibility and awareness of buildings. This study investigated the accessibility of the Asian Culture Center by access facilities. In addition, the survey of the present condition and satisfaction of access facilities was conducted. As a result of the survey, the usage rate was higher in the order of access facilities from the front square, and in case of satisfaction, it was preferred to use ramps rather than stairs. Therefore, it is necessary to plan the installation of front plaza for visitors and plan the access facilities connected with the plaza in the planning stage of a large complex cultural facility.

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P-0545 (PPS C24-1)

Exploring the Spontaneous Transformations of Traditional Dwellings of Ancient Towns in Liaodong Peninsula: a Case Study of Qingduizi and Fuzhoucheng

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Keywords: Traditional Residence, Architectural Transformation, Qingduizi Ancient Town, North-East of China

After the impacts of the Cultural Revolution and modern architectural revolution, contemporary cities in China are confronted with the dual demands of the inheritance and modernization of traditional architectures. And the protection of heritage in the northeast China is more urgent than in other places. Located in the northeast coast of China, ancient town of Qingduizi is one typical representative whose historical heritage buildings are disappearing. By taking ancient town of Qingduizi in Zhuanghe of Dalian as the research object, this article summarizes the architectural characteristics of traditional residences in the town, combs the present situation of architectural transformation, and analyzes their causes and motivations. In accordance with the requirements of core historical sites and other lots, the final part of the thesis puts forward outline suggestions for transformations of traditional residences.

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P-0494 (PPS C24-2)

The Application of Modern Snow Culture’s Elements in Northeast China

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Keywords: snow culture, Northeast China, snow elements, city space

Chinese snow culture is distinctive, having unique cultural attribute in northeast China especially. Cold climate and abundant water resources are the basic conditions for formation of snow culture. The unique climate also has created the fighting spirit to nature (also be influenced by multi-ethnic, diversified development since ancient times), forming the essence of the spirit which is a kind of primitive simplicity and solid quality, elegant and powerful cultural traits. The four seasons in the northeast are distinctive and the winter time is longer. In rational concept, "winter" refers to December to the second year in February each year, but in fact in the northeast, there are two more month.

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P-0111 (PPS C25-1)

Influence of Existing Urban Scale on Contemporary Architectural Design: a Contrast Reading on Two Bank Projects of Alvaro Siza

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Keywords: Historical districts, Mass, Interior space, Scale

Scale is one of the most powerful instruments in spatial design. It is crucial to decide on a right scale among all the design problems that should be dealt with in the first place. When faced with different urban environments, the existing scale of the city matters enormously in architectural design. In this essay, issues on scale will be illustrated through a contrast reading of two cases. Pinto & Sotto Mayor Bank (1971-1974) and Borges & Irmao Bank (1978-1986) designed by Alvaro Siza, are located in two different mid-sized towns in Portugal. They have similar size, but entirely distinct scale strategies. Pinto & Sotto Mayor Bank has fragmented mass and diverse internal spaces, while Borges & Irmao Bank has an overall look and a neat interior. The urban and architectural scale would be discussed in both cases in the existing context. The analyzing methods employed include series of quantified interpretations which are illustrated by axonometric drawings with exact measures. To conclude, the starting points of the two cases are opposite, one is from exterior, while the other from interior. The different design strategies reflect the acute perception of the architect, especially of traditional environment of the city. Analysis of the scale design methods employed by Alvaro Siza is an attempt to enlighten the architectural practice.

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Culture / 4. Urban Theory and History

P-0901 (PPS C25-2)

“Strategies For Coexistence with Future Cityscape through Giving Place Value to Architecture with Paradigm of the Times”

Focusing on the Case of South Korea

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Keywords: Paradigm; Old memory of place; Perception; Cityscape; Cases

Today's buildings in Korea, which have an average life expectancy of 30 to 50 years or less, mean that a landscape of a new city will be created after 100 years. Despite the fact that Korea's construction technology is recognized globally, the short life span of domestic buildings can be attributed to the recognition of users of buildings. In other words, in people's consciousness, architecture is more meaningful as a property value than a historical value that reflects paradigm. Accordingly, by constructing a strategy to increase the preservation cycle by raising the place value of buildings in Korea with a short life cycle, it is possible to reduce the time and economic loss for forming the urban infrastructure, and suggest ways to increase the value of the environment. The method for this study is to investigate and analyze the cases of preservation of exemplary buildings located in the downtown area in Korea and to draw conclusions and predict the expected effect through this study. Lastly, in the realities of architecture in Korea, I believe that giving place value to buildings can make meaningful urban scenes coexisting with past heritage by changing users' perceptions, extending life cycle and economic value.

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P-0847 (PPS C25-2)

Evolution of Urban Forms Reflecting Cultural Conflict and Integration: Case of “Tunpu” in Guizhou, Southwest China

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Keywords: Tunpu, Typology, Evolution, Cultural Transformation, Integration

Tunpu (屯堡) could be traced back to an unique military system in Ming Dynasty in the 14th century in China, that the Ming Emperor maneuvered an army of Han immigrants from the east to control the rebels of Yunnan and Guizhou region. When the war ended, the soldiers were ordered to settled down in these regions in order to consolidate the emperor’s frontier. Based on the investigation and mapping of 30 typical Tunpu settlements in this region, the types of the settlements were clearly classified by morphological and typological methods. The main findings are as follows: 1) The Tunpu settlements in the region can be divided into five typical types, the original type with strong military fortress characteristics, a type combines military characteristics with mountainous living together, a derived types dominated by consanguineous or geographical factor, and a type with strong asylum and defensive need. 2) The typical types of construction are mainly concentrated in three different time periods, corresponding to the early Ming, middle and late Ming, Late Ming to late Qing Dynasty; 3) The evolution of the village form reflects the history process of the following aspects: the vicissitude of the empires behind Tunpu people, the gradual weaken of their military culture and the conflict and Integration between the culture of Han immigrants and local ethnic minorities.

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P-0722 (PPS C26-2)

**Interpretation and Practice For Activating City Memory Space under the Perspective of Environmental Behaviour Science**

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**Keywords:** Environmental behaviour science, city memory space; stimulating, city industrial wasteland

Under the dual challenge of globalization and fast urbanization in China, the transformation and re-use of many urban industrial wastelands is facing to be demolished and reconstructed due to short and partial private interest, however, these industrial waste land and industrial buildings always carrying the residents’ precious memories on the city. Through the observation of the behavior pattern of people in urban public space and the analysis of the design method of humanized urban space, and apply it to Yida Diwujun urban cultural center in Dalian. The organic update not only focus on ecological environment and technical means, but the architecture, modern art and modern landscape design also provide the tendency and creative mode in aesthetic purport for transformation and re-use of industrial waste land and industrial construction.

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P-0572 (PPS C27-1)

**Research on the Integrated Protection of Historic Blocks——Lvxun Taiyanggou in Dalian County as a Example**

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**Keywords:** old city reform, historic blocks, protection and utilization, integrated protection

The historical environment protection centered by historic blocks is inevitable for all the cities and also an integrated and global question that involves society, economy and so on. Focuses on historic blocks of Taiyanggou in Lvxun and using the methods of literature study, field survey and questionnaire interviews, the article aims to analyze protection approach, developing pattern and comprehensive assessment of historic blocks, to discuss their integrated and sustainable protection strategies, to explore the technical method of the historic block’s protection and utilization plan on the grounds of quantization and empirical analysis, thus providing the theoretical and practical reference for the historic block’s protection and construction.

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P-0529 (PPS C27-2)

The Strategy of Urban Diversity Renewal Driven by Point Historical Architectures.
A Case Study of Small Apartments in Low-Density French Concession in the Downtown of Shanghai
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Keywords: small historic apartment, commercial development, low-development intensity, urban renewal, point strategy

As the 2040 city planning points out that the future increment of Shanghai's construction land is zero, the upgrading of the existing space quality has become the core issue of urban development, where the further conflicts between the historic building and the commercial developments is more intense. This paper chooses small apartments in the French Concession in Shanghai as the point objects of the study which show us their potential of dealing with the conflicts. The scene preservation of the historic district has achieved success in Shanghai. Meanwhile the historic apartments are separated everywhere in the bad quality. Therefore, small apartments may play an activator through their historical, spacial and social resources to promote the buildings' commercial value. Point strategy that the city permeates a building can reduce the mismatch-gap between protection of old buildings and their center location, as well as improve the diversity of the city not only in the history but also for the future. It is a kind of sustainable design strategy for cities.

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P-0501 (PPS C28-1)

Classical Revival—the Context Inheritance of Urban Renewal
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Keywords: Urban renewal, Classical revival, Context inheritance, urban morphology

The inheritance and development of urban context is one of the most significant considerations of design. While the classical conception in the sense of cultural geography expresses a sort of cultural concept, which exists as a typical representation of cultural characteristics of the past, the classical cultures of colonial cities differ in the means and methods of the implementation of context continuation. This article studies the formation of architectural context in Harbin, focusing on the problems of classical revival, which exist in Urban renewal, style evolution, context continuation, and the relationship of inheritance and innovation, and puts forward some principles and methods of architectural design from the perspective of morphology. City space is physical, as well as animated and spiritual. We are seeking not only the regeneration of traditional physical space, but also the regeneration of culture and spirit, which reflects a care of the city’s history.

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P-0162 (PPS C28-2)

The Influence of Architectural Culture Superposition on Urban Differentiation

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Keywords: Architectural Culture, Superposition, Urban Differentiation, Urban Spatial Form Diversity

The purpose of this paper is to analyze the inherent relationship between the architectural culture superposition and the diversity of urban forms. Through clarifying the concept of architectural culture and the analysis of its growth mechanism, the article put forward the thinking logic of human perceive urban space. Selected two cities in Rome and Xi’an as the research objects, in the method of literature research, from the three aspects (urban space, regional form and architectural culture) to make a further explanation. Finally, by clarifying the principle of the interaction between them, summed up the formation of urban spatial pattern under the influence of architectural culture, with a view to provide the basic data for the study of urban self-growth mechanism.

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P-0140 (PPS C29-1)

Indian Historic Cities, Exploring the Cultural Capital

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Keywords: Historic city, Architectural Knowledge system, Paradigm, Cultural capital, Heritage

The Indian concept of cyclic time which continuously regenerates itself has always been contrasting to the linear perception of the west. This phenomenon is reflected in the process of examining Indian historic cities as well. The paper attempts to understand Indian city as a system – a multi-dimensional cultural entity, with several sub systems within, which altogether makes it a meaningful integral whole. It particularly focuses on to the theory of “Architectural knowledge systems approach” which introduces a new paradigm in the current scenario of understanding cities. This approach puts forth a larger framework for understanding heritage, which at this juncture is a historic city, as a product of three elements – The Time, Place and people which demands for a comprehensive set of information on historical, geographical and anthropological data respectively. These three fundamentals examined together gives the context in which a city needs to be identified and understood. Each city and each piece of architecture in it deserves its own unique verbal, architectural expression, which probes into its soul. It is the duty of us architects, to explore and precisely find out the meanings – both physical and metaphysical – associated with any architectural entity so that further interventions can be rightfully planned.

Specifically focusing on the historic city of Thrissur, in India, this paper will try to explore the possibilities of rightly deciphering a complicated, diverse Indian Historic city through its various layers of meanings. Thrissur, well known as the cultural capital of Kerala, has a unique identity among the Indian historic cities. The presence of one of the oldest Siva temples right in the city center with a central open space, the hierarchical veedhis radiating from it, the vibrant trading and commercial core, a well-planned water system inseparable from the town planning stratagems, Palaces, the Vedic learning center Brahmaswom Madhom which are all “living” components that add on to the metaphysical charm of this historic city. Most important of all is the diverse community who occupied the city at various points of time and became an inseparable living entity of this cultural capital. It is this heritage along with the seamless manifestation of its spirit over the physical structure of the city which makes it a unique entity worth exploring.

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Culture / 5. Urban Planning and Design

P-0818 (PPS C29-2)

Transplant Surgery to the Protection of Urban Cultural Heritage: a Research on the Protection Based on the Concept of “Urban Spatial Heritage”, and the Participable Protection Mechanism

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Keywords: Urban Spatial Heritage; Future Heritage, Sustainable; Integrative; Cooperation

Because of our limitations on historical understanding, a large number of heritage is demolished in the expansion of cities and capital. A large number of designated urban heritage is difficult to be protected effectively. Some of them have been artificially stripped from the urban context and exhibited as exhibits in the city. They’re isolated from the contemporary urban space. To reinterpret the relationship between urban heritage and city by the idea of "organ transplantation" in surgical operation. To research the method of the protection of urban heritage and the restoration and reconstruction of its role in the city. A concept of “Urban Spatial Heritage” is put forward, and combine it with the “Seoul Future Heritage” to correct the deficiencies of the current urban heritage evaluation system. By cases analysis of problems in the current urban heritage protection, to explore its inherent contradictions. On this basis, this paper attempts to put forward the method of socialization and marketization. To develop effective and sustainable urban heritage protection and development programs.

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P-0780 (PPS C30-1)

Urban Pedestrian Linkages in the Heritage District of Kuala Lumpur

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Keywords: heritage district, urban pedestrian linkages, building connection, pedestrian comfort, walkability

Urban linkage is not the only but is the primary feature connecting urban outdoor spaces. A good urban linkage connects the important nodes and allow people to reach and appreciate the place. This paper focuses on the pedestrian linkages design in the urban heritage district context with the question of making comprehensible links between discrete nodes. While such linkages are concern in connecting the discrete buildings or sites. The objective of the study is to investigate needs of urban pedestrian linkages at the Heritage District of Kuala Lumpur and to evaluate design factors that attract pedestrian users in the study area. The findings explain the function of urban pedestrian linkages in connecting Heritage Site of spaces and places and the importance factors in influencing people use of pedestrian linkages in the study are. Field observation and in-depth interview revealed the needs of the linkages in the Heritage area to make people appreciate the Heritage Site. With this study, it concludes and reveal the regeneration of Kuala Lumpur city but have not successfully integrated with the existing Heritage Buildings, Heritage Site, local context and surroundings. The design of new modern buildings does not help in preserving the character and identity of Heritage District when the pedestrian linkages are discontinued, missing and not in an appropriate condition.

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P-0736 (PPS C30-2)
The New Strategy of the Historical and Cultural Protection During the City Renewal For "This Time, this Place, These People": Research Based on the Southeast Corner in Ming City Wall Area in Xi’an

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Keywords: gentrification, xi’an ming city wall area, bottom-up strategy, district, industry

In the spring tide of the globalization revival, the revival of the old city area is accompanied by gentrification. Declined and dilapidated old town has been dressed as a modern metropolis, and elbowed tourists bring commercial and success. However, after the prosperity, many practical problems appear. First, new economic model of the old district don’t bring more opportunities to low-income people, and they may even be forced to be migrates, and the space of gentrification appears accompanied the slums; Second, not only the old history should be commercialized, but also the living history of the local residents needs to be preserved, because the revival of the old city should be about the resurrection of the history of the city. Urban vision that 2016 Habitat III, the United Nations Conference on Housing and Sustainable Urban Development put forward is to use human settlements equally, and the revival of the old city should provide the residents a more inclusive and sustainable possibility. And "bottom-up" self-organized revival of the old city should be supposed to retain more culture of "here, at this time, this person" except that the residents can also be stayed .as for the research for historical and cultural city in the southeast corner in Ming city wall area in Xi’an City, author views China’s inland city historical and cultural city, Xi’an , through on-the-spot investigation, data analysis, historical carding and network platform in propaganda for subsequent "bottom-up" self-organization revival, and it is also as mentioned in the charter of the Washington in 1987: “The protection of cultural heritage and local resident life are closely linked, which includes protecting the people living inside buildings”.

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P-0705 (PPS C31-1)
Building as Street Interface: Case Studies in Nanjing, China

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Keywords: street space, street interface, plot pattern, city rules

The paper focus on the evaluation of the street interface, composed of street buildings, to understanding the characteristics and the mechanism of the form. The evaluation is meaningful not only for the cognition of the street space, but also for the urban design afterward. The paper carefully combed the city regulations that influenced the street buildings. Then based on the Streetscape ruler, the paper studies the street width, the plot layout and the plot index to establish the mathematical model, and analyzes the detailed effects of these three on the street building layouts, and puts forward the suggestions to enhance the streetscape. The research concludes that the plot pattern and the city rules of separation distance, setback regulations and so on are key elements determining the alignment of the building’s facades; and the land use(indicators are important elements which influence the outline of the street buildings. For different types of streets, urban design in the future need to propose different strategies to improve the quality of the street space by combining the plot pattern and the existing regulation system.

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P-0670 (PPS C31-2)

Micro Renewal the Way For the Historic Block to Regeneration
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Keywords: historic block, dongguan block, micro renewal, regeneration

With the spread of modernist planning, the uneven development of urban space is becoming increasingly obvious. The cultural context of the block as the soul of a city is drying up day after day. The artificial city after repeated reconstruction rapidly occupies the most area of the city, and the historical and cultural blocks surrounded have increasingly narrow space. Historical blocks gradually formed and developed in the long process of historical development, the continuous renewal maintains their own vitality and at the same time accumulates the culture and style of the times. Dalian Dongguan block is one of the few existing historical streets that blend Chinese and Western cultures, but its original aesthetic value, cultural memory and environmental diversity have been gradually buried, so the renovation of Dongguan block is of great significance for the continuation of the city's historical and cultural context. This paper took Dongguan block as an example and introduced the bottom-up guiding strategy of micro-renewal that is based on social space and takes the original owners of the historical block as the sharers of the interests of reshaped space. Micro-renewal is not to achieve a final state of the city but create a viable way for self-development of the historical block so that the crack between the city and the historic block can be rewoven to continue the city's memory and soul.

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P-0649 (PPS C32-1)

From Tabula Rasa Development to Spontaneous Regeneration ——Study of Urban Renewal Models in Historical Districts of Beijing
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Keywords: hutong, urban regeneration, organic urban renewal, beijing

The historical districts lying in the inner city of Beijing, has drawn increasingly attentions for its highly historical and cultural values. However, like any other underdeveloped historical neighborhoods in the world, the preservation and redevelopment of these areas are facing a host of problems, such as high population density, lack of public infrastructure, declining architectural quality, outmoded business types. During the 1990s and 2000s, a large-scale of building renovation had taken place. The whole-sale destruction of the old Hutongs and their replacement with high-rise blocks (latterly being referred as "Tabula Rasa" Development) inevitably brought serious destructions to the old urban fabric. Consequently, in 2000, a preservation planning was published to strictly control over the construction in the historic districts. Though the urban fabric and authenticity remain, the living standard and architectural quality have declined dramatically. Nonetheless, the attempts to explore a more organic and social sustainable urban renewal approach have never stopped. Based on an in-depth case study of seven representative renovation projects in Xicheng District, this paper gives a detailed analysis on the different modes of these projects. Which includes the complicated property ownership, the different parties involved in and the different roles they played, the objectives and building technics they introduced, as well as the life-style and gradual social transformation behind it. As a conclusion, different urban renewal models in historical districts of Beijing are concluded, from the traditional "Tabula Rasa" Development to "Nodal" Development as well as several spontaneous regeneration models. The study also indicates that it is feasible and necessary to get local residents involved in the renovation process.

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P-0639 (PPS C32-2)

A Typological Study on the Space For Environment Improvement in the Case of YOKOHAMA SHIMIN MACHI-BUSHIN Project

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Keywords: yokohama shimin machi-bushin project, citizen-driven, regional environment improvement, categorize

This study extracted constituent elements of the Improvement of the Living Environment from the proposals suggested by citizens to address local issues. Then, we analyzed the constituent elements to identify what are the objects of improvement, what are their uses and who are the users. To attain this end, we conducted an analysis of 124 citizens’ proposals submitted in the YOKOHAMA SHIMIN MACHI-BUSHIN Project at Yokohama City in Japan from April 2005 to January 2016. As a result, the object of improvement were physically categorized as Internal Space, External Space, Small Facility, and Townscape. Representative uses of the objects of improvement appear to be Safety, Rest, Disaster Prevention, and etc. (15 Elements of use) considering the nature of community design (Machizukuri), however, this study shows that the uses are more complex. Therefore we tried to find out what are the uses of the objects of improvement according to three criteria: activity, condition, and function. Furthermore, we clarified whom the proposers expect to be the users in their proposals.

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P-0588 (PPS C33-1)

Reclaiming Publicness: Transforming Political Plazas Into Everyday Public Space

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Keywords: Publicness, Political Plaza, Spatial Transformation, Participation

Political plaza, usually symbolize the rebirth of the city, was not only designed as the geographic heart, but also expected to be the soul of the urban hub for all citizens. Publicness is the key to interpret the spirit of political plaza. From political gathering during early statement, the multiple leisure cultural programs in modern society, and then to the various informal activities nowadays, this paper tries to outline the context and clues of how the dramatic shifts happened, and how the urban form should respond to the change. While the paper will review the origin, transformation, and contemporary interpretation of political plazas in general, two cases will be deeply discussed, the People’s Square of Shanghai and the City Hall Plaza in Boston. The paper draws the conclusion that after its struggle and fall of modernization period, “publicness” in political plaza has entered a period of revitalization and various develop approach. This paper also summaries 3 sets of contradiction in terms of “publicness” in political plaza.

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P-0544 (PPS C33-2)

Urban Redevelopment Potential Zoning of Urban Construction Land in Harbin, China

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Keywords: urban construction land, urban redevelopment, potential zoning, control strategy, harbin, china

According to the threatening situation of the ecological bottom line, the urban spatial development pattern should change from extensive expansion to intensive growth. Tapping the potential of internal urban construction land is the foundation of promoting the urban planning transformation and realizing coordinated development of urban social economy and ecological environment. This paper takes the street units of urban construction land in Harbin, China as the research object, and presents the index system of urban redevelopment potential from 5 aspects, including land use attribute, location condition, economic value, landscape environment and social service. And the database of urban redevelopment potential is structured through the index attribute assignment and spatial vectorization for each units. Combined with Analytic Hierarchy Process method and Fuzzy Comprehensive evaluation method, the comprehensive index of urban redevelopment potential are calculated for delimiting the 4 level of potential zoning. This paper will provide the theoretical reference and technical support for the adjustment and control of urban construction land in Harbin, China.

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P-0408 (PPS C34-1)

Self-identity in the Daily Life World: the Exploration and Research of “Bottom-up” Approach on the Xi’an Old City District Regeneration.

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Keywords: urban regeneration, daily life, bottom-up, self-identity, old city district

China has stepped into the post-urbanization stage, in which the identity of local culture and the promotion of city life quality has begun to attract more attention, and the values gradually transform from the ultimate pursue for “Grand Vision” into the reality of “Daily World”. From the perspective of daily life, this paper expects to focus on the living spaces hidden in the city with typical local cultural characteristics, respect and care for diverse demands of various groups, as well as present the meaning and value of different lifestyles. The thesis takes an example of urban regeneration design on the “Xiang Zi Temple” district in the old city of Xi’an, establishing an update path of “Bottom-up”, which needs to search for the specific characteristics and current problems, form the update targets and strategies gradually by analyzing a certain group of people in a particular region, and finally makes the old city area more inclusive, resilient and sustainable.

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P-0147 (PPS C34-2)

Artificial Nature

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Keywords: urban, ecosystem, chinese garden, bionic

Chinese traditional garden construction obeys systematic steps, "digging water and piling rock " followed by introducing vegetations and animals in them. So does the Chinese traditional urban construction, forming an urban ecosystem with closed material cycle and energy flow between the city and nature. Since the new concepts like "landscape city" integrate natural elements into the artificial environment, relying on building bionic technologies, it has been a tendency to establish mechanism similar to natural conditions in the artificial environment, so that the energy flow along with the material cycle can be integrated into the ecological circle. Thus, urban development begin to develop in the direction of artificial nature. Take the living group of Xingqing Park for example, put forward a systematic strategy of artificial nature to construct an urban ecosystem: construct wetlands and water systems by artificial drains or even water pipes; combine the green space indoor and outdoor with the layout of Chinese traditional garden; attach the vegetations into residents’ "private garden" or workplace; learn from the biological nest to create a vertical forest.

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P-0132 (PPS C35-1)

Study on the Evaluation of Urban Old City District Renewal: a Case Study of Harbin

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Keywords: urban renewal, harbin chinese baroque block, AHP, evaluation

With the transition of economy and society of China, urban renewal has become a key issue in China’s process of urbanization. A considerable amount of research has been studied on the evaluation of urban renewal, as it is extremely helpful when it comes to strategy-making. However, although the approach of renewal evaluation in urban old area differs from that in new towns, few researches have focused on urban renewal in old areas and even less at the local or district level. This study therefore takes Harbin old city district as an example to develop a model to evaluate its renewal level and effects, in which the economic, political factors, land-use, social, and their correlations are considered comprehensively. Analytic Hierarchy Process (AHP) approach has been applied to set a comprehensive renewal framework in the Harbin old city renewal. The framework is composed of three layers: goal layer, rule layer and measure layer. Indicators and there weighting factors in three layers are presented by sufficient questionnaire surveys. By calculated by the evaluation framework, new renewal strategies of Harbin old city have been presented in the aspects of historical preservation, environmental greening, and cultural atmosphere and so on. The evaluation approach applied in this paper will also provide innovative theory and reference of urban renewal evaluation of other old cities.

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Culture / 6. Landscape Design and Theory

P-0800 (PPS C35-2)

Landscape Regeneration of Urban Cultural Heritage: Case Study of the Nanjing Ming City Wall Greenway

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Keywords: landscape regeneration, urban cultural heritage, greenway, the ming city wall

Landscape regeneration of urban cultural heritage is an effective way to protect and reuse urban cultural heritage as an element of urban landscape, which makes cultural heritage not only exist in the world, but also back into the world. Landscape regeneration of historical heritages is feasible and inevitable. On the one hand, historical heritages are valuable elements of urban landscape, with its memory-carrier function, aesthetic value and ecological potential. On the other hand, as a part of the built environment, cultural heritage is an inevitable part of urban landscape due to its predictable long-term existence in the past and future. The paper further discusses the landscape regeneration of the Ming City Wall, which is the largest ancient wall around the world, based on the exploration of the Ming City Wall Greenway in Nanjing (China). The paper summarizes the construction and development process of the greenway at first. Design strategies of the landscape regeneration of the Ming City Wall are discussed from two sides: protection of cultural heritage as urban landscape and contribution to urban landscape as cultural heritage. The problems and outlook of landscape regeneration of urban cultural heritage are given at last.

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P-0230 (PPS C36-1)

Taking Shrine as the Soul - the Analysis of Cultural Core and Spatial Construction in Urban Memorial Gardens

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Keywords: memorial gardens, culture core, memorial space, spatial construction, confucian thought

Populated theatrical buildings have strong requirements for valid evacuation design. This paper aims to study the evacuation process and improvement strategies in theatrical building by a specific object, the Harbin Grand Theater. By means of simulation in the Building EXODUS software, modification strategies are worked out from the problems found in seats configuration, as well as paths and egresses setting. At the beginning, with all related field surveys done, the research build up a simplified model for simulation, and put simulations under three kinds of crowd composition due to the differences of crowd parameters and cognitive status. The assessment and analysis is based on the evacuating times and visualization of evacuation process. The original design is eligible basically in evacuation performances. The authors propose some modifications to make it more efficiently.

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P-0228 (PPS C36-2)

Study on the Chinese Historical City Pavilion and Its Cultural Core Connotation
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Keywords: city pavilion, historical urban landscape, cultural connotation, physical space, protection and reconstruction

The pavilion is an iconic symbol of Chinese historical urban landscapes. It plays a significant role in strengthening national consciousness and promoting the city image. Therefore, the purpose of this paper is to preserve the core cultural value of urban historical landscape, and research the organically combining physical space and cultural connotation. Firstly, this paper takes city pavilions in Song Dynasty as the research object, uses the method of image-literature mutual verification in Chinese historical documents, and explains the concept of City Pavilion. Secondly, around the ideological basis of Confucian "heaven-monarch-people" view, this paper analyses the formation mechanism and cultural connotation of city pavilions, about 3 different internal construction reasons, natural public, state public and civilian public. Thus the paper extracts 3 typical types: 1) Feng Shui type; 2) Ritual type; 3) Entertainment Education type. Lastly, it analyses the corresponding projection of Confucian public hierarchy concept in spatial structure of the city pavilions, specifically scenic point type based on the macro landscape, axisymmetric type based on ritual system rules and free point type based on public convenience. This study aims to provide some basic theoretical support for the protection and reconstruction of Chinese historical urban landscape.

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P-0137 (PPS C37-1)

The Creation of Urban Square Landscape under Cultural Context
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Keywords: urban square landscape, cultural context, cultural memory, cultural evolution, cultural association

The landscape of urban square is not only the symbol of the city, but the cultural performance. The creation of urban square landscape is of great significance to the inheritance of historical context and regional culture, and also the important means to enhance the quality of city. With cultural context as a starting point, this paper explored the design issues of urban square landscape. It proposed three strategies in the design of urban square landscape as the cultural memory, cultural evolution and cultural association through analysing the concept of cultural landscape and the classification of the three, combined with practical cases for objective description. As the prototype of urban landscape design, the effective extraction and translation of the specific elements, abstract elements and associative elements are the prerequisite for the creation of urban landscape, with the key link of abstract, visualization and symbolic design method. These three design strategies will help to cope with the creation of urban square landscape under different regional cultural environment.

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Culture / 7. Environmental Design and Theory

P-0861 (PPS C37-2)

Place Attachment and an Old Apartment Complex: Focusing on the Urban Redevelopment Site is Seoul

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Keywords: Place attachment, environmental psychology, urban redevelopment, old apartment complex

This study intends to understand the people's emotional and psychological attachment to the old apartment complexes in Korea. Recent urban redevelopment plans aim at revitalizing old apartment complexes to improve the living conditions as well as the local economy. However, the old housing environment is still viewed by the inhabitants as an ecologically and socially sustainable form of residential housing. We identified the factors that influence 'place attachment' in the physical environment of the early types of the apartment complex. The research area consists of the apartment buildings built around the 1970s. We defined the relevant concepts of place attachment through literature reviews and identified the characteristics of the research site. A series of interviews were conducted with current and past residents for empirical data collection. The answers were analyzed using three categories: the surrounding environment, community, and opinion on a new redevelopment plan. The result shows that spatial experience in the apartment complex was a critical factor for place attachment rather than the surrounding plant environment. Psychological attachment to the place was recognized at the individual level but not so much at the community level. Community organization was not solid as to generate common opinion to take direct action against the government and developer-led redevelopment.

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P-0700 (PPS C38-1)

A New Model Ecodesign

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Keywords: ecodesign education, e-education, island academy

Eco design education is an innovative practice in order to carry citizens to their highest creative potential. It offers open enrolment or re-entry students, students from other professions and trades, and other promising students regardless of academic background. It also offers academic credit for work in planning, design, and architectural offices.

Eco planning develops the environment; as an answer to the main problems of our environment, country and the globe are urbanization. In order to find solutions for these problems and educate the society, a group of professionals started to establish a foundation called ADAKADEMI Foundation is in İstanbul, a very specific settlement on an Island group called Prince Islands.

It is first of its kind in Turkey; Student experimentation and visionary exploration require to follow not any design ideology or convention and ADAKADEMİ encourages all students to find their own personal modes of expression.

Eco design and education in an island environment for design also researched and worked in detail. For any design, interdependent system qualities found in natural systems such as Diversity, Resilience, Growth and Reclamation used as evaluation criteria.

Political Science, Urbanization and Environmental Science, Green Environmentalism and Evolutionary Planning, Architecture and Ecology, studied in tiny workshops - archive - study rooms, places that can also entertain guest researchers and also that can be used for art, music and culture conversations.
In this paper, process of decision making for eco education goals discussed, and proposed a set of criteria for evaluating choices examined. Understanding networks as a context can help us identify where design and interventions will bring the maximum benefit for researchers. It is expected that this discussion may add some definition to our aspirations and help us more fully achieve them.

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Culture / 11. Others

P-0492 (PPS C38-2)

Critical Regionalism in China and the Deduction of Existing Traditional Spiritual Culture

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Keywords: Critical regionalism, Five stages, Traditional spiritual culture, Behaviour, Creative technique

Mr Feng Jizhong thought the Chinese gardens can be divided into five stages , which is " forms , emotional, rational, immaterial, meaning", then regarded the "form, emotional and rational" as the objective stage, and the "immaterial" as both subjective and objective, and the "meaning" as the subjective stage. Reappearing natural to satisfy possessiveness and presents natural is named as “forms”; Conforming to nature and seeking he pleasures of nature, and taking nature as the emotional carrier is named as “emotional”; Treating the natural trace as teacher objectively and exploring it is named as “rational”; To reflect nature and to pursue the interest in nature and ecstasy with the details is named as " immaterial "; To create nature to write the interest in their mind, the expression of the spirit is named as “meaning”.

Back to today, architecture of critical regionalism already be universal conscious for Chinese, and as we all know, according to the Robert Arthur Morton Stern’s viewpoint, critical regionalism are divided into three kinds of design mode, contextualism which emphasize the idea, metaphor which need pay attention to methods and the gimmick which are pay attention to the adornment. History as guide, compared with the development of the Chinese garden, contextualism, metaphor and decoration also exist the difference in impact strength of subjective and objective? Even there are good or bad modes? In this article, the author try to find the five stages of critical regionalism architecture in China, and then discusses the differences mentioned above. According to the human behaviour is the important factors of architectural design, the authors think that the function and cultural differences lead to the differences of different crowd behaviour, in turn, contribute to the discrepancy between different parts of the architectural form, it will now understand critical regionalism in the style of buildings are roughly divided into two categories. Therefore, the authors think creative technique of the critical regionalism architecture should return to focus on the behavior of modern factors, the traditional spiritual culture must existing and still affecting the behaviour of modern people.

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P-0340 (PPS C39-1)

Conflict and Fusion of Old and New Urban Development Structure Conversion - a Case Study of Harbin Institute of Technology Science and Technology Park

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Keywords: Urban development; urban conversion; conflict and fusion; Science and Science and Technology Park

The development of the city is a dynamic process of renewal and transformation. Based on the theory of urban transformation, this paper analyses the development and evolution of urban integration, and also the problems and contradictions in the process of urban renewal and resource protection. The causes and concept of Science and Technology Park is defined and analyzed, from the microscopic view of the HIT Science and Technology Park. By analyzing and contrasting the construction process of the Science and Technology Park and the problems encountered in the related research, this paper summarizes the contradictions arising from the urban industrial transformation and the needs of the crowd, and sums up the contradictions arising from the upper management and the public. On the basis of the exposition, the author points out the existing problems and the suggestions for the future development of it.

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P-0223 (PPS C39-2)

Study on the Reuse of Traditional Materials in Urban Architecture Based on Context Continuation

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Keywords: Traditional material, Regionalism, urban climate, urban landscape, urban culture

In the pre-industrial age, building materials were taken directly from nature, and building materials formed a natural link between the building and its geographical location. After the industrial revolution, with the development of concrete, glass and other modern building materials, the relationship between architecture and its area was fragmented. The city building and local environment does not adapt to each other, for reflection and correction of this situation has continued since. The traditional building material advantage is the thermal performance and other advantages. In the process of architectural design and construction, the use of traditional building materials can save energy, manpower, and practice the concept of ecological environmental protection. Therefore, the traditional mining potential of materials has become an important means of integration of city construction and environment in the specific design process, through the material caused by physical experience, emotional and cultural resonance, in response to the geographical environment of city building. In this paper, the "city" environment is understood as "urban climate", "urban landscape" and "urban culture". Discuss from the three aspects, through the various elements associated with "city", the traditional building material is used for constructing multi-level association between city and environment, resist globalization since the geographical features and cultural diversity and homogeneity of the attenuation of erosion, provide a useful reference for the application of building materials city.

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Among Walls. the Incarceration of Contemporary Society in Apartments Complexes on Rio De Janeiro West Zone.

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Keywords: Rio de Janeiro, Housing, Real Estate, Wall, Segregation

In the last two decades big apartments complexes completely walled began to spread throughout the city of Rio de Janeiro and within their enclaves true mini-cities have been developed. These complexes have the entire necessary infrastructure so their residents do not have to go beyond their walls, isolating themselves from the city in islands restricted to the elite. At the same time several walls were erected to hide and isolate the poor parts of the city, and its residents from the rest. While inside the walls of the condominiums, the residents have several attractions and amenities for their needs, in the favelas and irregular subdivisions the opposite occurs. From the lack of basic infrastructure, security and quality living spaces, the feeling is that the State is not present. Due to the social inequality and the consequent violence, the street became the space "between walls" of the city. On one side, space for fear and insecurity for those who live only between equals in the comfort of the condominiums. On the other, a space of free appropriation for social and cultural movements, and for homeless people.

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Nature / 3. Architectural Planning and Design

The Research of Curve Elements Used in Original Bamboo Architecture Design

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Keywords: curve elements, co-existence relation, original bamboo, manifestation mode, modernism

Bamboo features abundance, short growth cycle, low carbon and low cost, which has a broad prospect in the background of sustainable development. The original bamboo building has a long history in China and forms its unique local culture in the long time of social production and traditional life. This paper is based on a large number of original bamboo building design cases. First of all, bamboo’s mechanical property, natural property and spirit connotation are analyzed to find out the co-existence relation between bamboo and curve. Then the curved shape design method in original bamboo building is concluded and classified by means of line, surface and body form. Last but not least, modern design strategy of the curve elements adapted to original bamboo building is proposed from three aspects as shape design, structure logic and the spirit of space. The result of this research will instruct the modern original bamboo building design and promote bamboo, the traditional building material, to revitalize in modern architecture design.

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P-0540 (PPS C41-1)

Disaster Sensitive Architecture For the Tropics: Building Resilient Communities in Developing Nations. a Case Study in Northern Costa Rica.

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Keywords: architecture, environmental justice, disaster, costa rica

The poor in developing regions are usually the most vulnerable when affected by climate change. They have the least ability to cope with natural disasters. To explore these topics the paper carries out a literature review of the most relevant peer-reviewed journals that discuss architectural practices that adapt, reduce risks and are resilient when struck by natural disasters, specifically water-related events. It then focuses on identifying the predominant design and construction practices on a region in northern Costa Rica, struck by Hurricane Otto in November 2016. The results show that the adaptive and resilient capacity of the built environment in these communities requires a shift in the way buildings are conceptualized, designed, built and maintained. The results from the literature review identified several categories to assist disaster-sensitive architectural design. Framed under an environmental justice perspective, a comparison between the results of the literature review and the on-site observations offer insights as to which are the best practices aimed at increasing the resilience of vulnerable communities. Developing adaptive and resilient architecture is necessary to cope with natural disasters, but it requires an integrative approach that includes community participation, recognition and the integration of the ecological domain as a fundamental design tool.

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Nature / 4. Urban Theory and History

P-0444 (PPS C41-2)

Urban Design and 3 Kinds of Space-Related Epidemic Diseases

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Keywords: urban space, space-related epidemic diseases, spatial disease-causing factors

The transformation of human disease patterns and the development of preventive medicine have aroused the attention on the influence of ‘Urban Space’ towards ‘Health’ in public health area since 1980s; while simultaneously the failure of modernism and many health issues caused by urbanization have also brought universal reflection on architecture. Under such background, the combination of ‘Diseases’ and ‘Urban space’ has become a new branch in architectural theory and practice. Under the rapid urbanization in contemporary times, chronic diseases including obesity, Mental Illnesses and Respiratory diseases for which the leading risk factors are Urban space and lifestyle among urban citizens have become increasingly severe. This paper study the relationship between ‘Urban Design’ and ‘Diseases”. Three questions would be attempted answered in the paper: Is urban space the core factor influencing human health? What is the mechanism and approach of such factor? What can be done to improve and raise the quality of urban space so as to achieve the goals of ‘Disease Preventing’ and ‘Health Promotion’?

The research is presented on the basis of the following related discourse and practice of designing and renovating material space as well as creating the healthy city. These are established from the study of architecture influenced by the development of public health in the past 30 years or even the last decade and from the angle of medicine and through the method of architecture. Firstly in the paper the existing
domestic and international research about the influence of urban architectural space on health is
rearranged and then the developing form of Healthy city Theories is built up. The paper then thoroughly
summarizes 3 affecting mechanisms of urban architectural space on human health, establishes the
relationship between ‘Space-Related Illnesses’ and ‘Urban Disease Predisposition Space’ and on such
basis concludes three correlated strategies to solve Urban Medicalizational Architectural Issues.
Eventually related issues about Healthy city Theories and Practice are unearthed through the
comparison between China and western countries, in the expectation of providing theoretical support
for preventing related diseases and promoting urban space quality

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P-0430 (PPS C42-1)
Layout Research on Traditional Villages under the Perspective of Climate Adaption

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Keywords: traditional settlements, energy, climate adaption, street system layout

“This world, a monster of energy” with these words Nietzsche suggest that energy has the ability of
being a dimension indicating changes in the world. Cities as creatures of human should obey the law
of energy flow. However, energy flow in a city is so complex that we cannot describe it with a single
maxim, only when under a certain perspective we can find some trace which act as an evidence of
cities’ nature they conduct the formation of cities. Nowadays, more and more modern cities become
homogenous which is the reflection of some dominant laws, they can be economical or political while
we entitle them with globalization. In some traditional settlements, however, we can still find evidences
of responding local climate and geography which at the very beginning of settlements showed strong
influence. These evidences are the unique ideas acceding from ancient residents’ experience and have
become specific distinctions of these cities. This paper tries to describe the thermodynamic values on
morphology and typology facts of aboriginal settlements for example Shibam in Yemen, traditional
Chinese settlements. Providing some ideas on how to create an efficient energy flow which is the key
towards climate adaption. This paper is subsidized by the National Natural Science Foundation of
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Nature / 5. Urban Planning and Design

P-0841 (PPS C42-2)
The Aura of Sylhet City

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Keywords: aura, livability, sylhet city, urbanization, environment, responsive urban design

The city of Sylhet is known for its distinctive natural features. Geographically it is located in the
northeastern part of Bangladesh and it is dominated by Surma-Kushiyara flood plain. The urban center
is located on the northern bank of Surma River. Although the administrative boundary defines the city’s
territory on both northern and southern banks of Surma. In this paper the term “Aura” is used to put an
emphasis on livability of a city. In this paper, a city is considered as living organism that inherits certain uniqueness creating an aura. It changes frequently through the process the city goes through. It emits positive aura when equilibrium between natural and built environment is achieved successfully. The opposite happens if that equilibrium fails. As an example, the city of Sylhet is chosen to elaborate on this term and explain the importance of rightful urban design in discussion.

The research is a combination of systematic and extensive literature review, geographic analysis and exemplary urban design practice. The result obtained through geographic analysis indicates to deterioration of Sylhet’s known aura due to decreasing percentage of vegetation and water body. It is feared that Sylhet will be losing its aura in near future if the current trend of urbanization and rigorous infrastructure development is practiced. Sylhet can adopt alternative development scheme to protect its aura. It is still possible to reverse, rehabilitate and revitalize the destructive process of rigorous urbanization. It can be achieved through responsive urban design.

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P-0642 (PPS C43-1)

Spatial Function Identification and Development Strategy of Small Towns Based on Ecosystem Service Value

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Keywords: ecological service value, spatial functional identification, development strategy, township area

The natural space of the villages and towns and the production space of agriculture, forestry and animal husbandry carry a variety of ecological service functions, and their value promotion is the basic criterion of human settlements and activities. Based on the perspective of "ecological service", this paper analyzes the ecological service function and value composition of township space from the perspective of human welfare and demand, and then constructs the spatial classification system and function evaluation model of "ecology-production-living" for villages and towns. Furthermore, in this paper, the ecological service value measurement method is taken as the basis for identifying multiple functions, based on this, the spatial development strategy of strengthening the functional characteristics and optimizing the allocation of resources are discussed, to provide the decision-making basis for the co-ordination of regional development and enhancing the competitiveness of small cities and towns.

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P-0597 (PPS C43-2)

Impact of Proximity to Urban Railway Transit on Qualities of Urban Life —— Exploring Satisfying Sustainable Development in Station-area and the Efforts in Urban Design to Attain an Attractive Nature-inspired Place in Metro Station Region

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Keywords: Public space, human needs, place value, urban design principle

The urban railway transit brings both dynamism and conflicts in urban spaces, directly influencing people’s activities and making the built environment out of the ordinary in station-area. Taking the public space in urban railway transit station region as the object, this study explores how the spatial layout
and mode of sustainable development are influencing the quality of urban life in station-area. Based on this, a study of literature firstly explores key issues of “TOD” (Transit-oriented Development) that should be considered in the design of public spaces to create a satisfactory living environment. Moreover, the application of Node-place model is helpful to explore the possibilities of transforming the station area from an urban “negative attractors” to a “configurational attractor” in the local network (Thammaruangsi, 2003). After further narrowing the scope of research, it concludes some key factors considered in creating favorable conditions for quality of place to develop. To understand these, a systematic analysis of the conditions and factors that are helpful to create vibrant nature-inspired places was conducted during the case study projects. Finally, it elaborates how an attractive nature-inspired place can be created and applied to become settings that support an array of human behavior and living welfare.

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P-0262 (PPS C44-1)

The Relation Between Nature, Landscape and Urban Space in the Projects of Roberto Burle Marx For the City of Águas De Lindóia, Brazil.

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Keywords: roberto burle marx, nature, landscape, urban space, águas de lindóia

This paper has a main purpose to analyze the relationship between nature and city in the landscaping work of architect Roberto Burle Marx for the city of Águas de Lindóia, São Paulo, Brazil, in the middle of the 20th century, in order to investigate how the Architecture of the Brazilian Modern Movement related the constructed space with the natural or projected landscape. Important projects were analyzed in the city, the New Bathhouse and the Adhemar de Barros Square. In both cases we will observe the integration between architecture and nature and its relation with the preexisting landscape and the one that was later formed. We identified that the landscape of Águas de Lindóia underwent a profound alteration with these interventions in the city urban space, revealing the existing relations between nature and city in the interstice of Architecture of the Brazilian Modern Movement. The methodology used was based on the analysis of old photographics, oral historiography and technical visits in the projects that gave us subsidies to reconstitute the aerial image of the city in the middle 1950’s. This image contributed to analyze the urban landscape transformation in two moments, before and after the implantations of the Burle Marx projects.

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P-0035 (PPS C44-2)

Application Research of the Chinese Traditional Ecological Wisdom

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Keywords: ecological wisdom, traditional, design method

In the transition period of China's urbanization rate reached 50%, the excessive stage from the traditional industrial civilization to ecological civilization is the inevitable choice. In the transition period, we cannot only absorb the western development experiences of eco-city, but also should combine China's traditional ecological wisdom from the agricultural civilization during thousands of years. In this paper, the author analyses the concept and origin of traditional ecological wisdom, the related research status and development trend at home and abroad. Collect and select the technique or technology which is full of ecological value or representative, the ecological engineering which is time tested or benefited by ten thousand generations in certain region of China, choose two typical cases of the Chinese traditional ecological wisdom. On this basis, research the ecological strategies and methods
of these cases. Extract elements of traditional ecological intelligence to concise wisdom and draw the outline of urban soul, which is called ecological wisdom spectrum. Finally, combining with China's environmental problems since the industrialization and the various problems encountered in the process of ecological city construction, to explore how to use the ecological wisdom spectrum guiding the sustainable studies, planning, design and management of the contemporary urban.

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Nature / 7. Environmental Design and Theory

P-0743 (PPS C45-1)

Permaculture Parks and Children of the City
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Keywords: Permaculture, Children, Parks, Open Spaces, Sustainable Cities

The paper focuses on how the shrinking open spaces in a city are affecting the children of the city. It also examines how the existing open spaces and parks are not a nourishing place to play, grow and thrive. Parks in the city do not address vital issues like fragmented food chains and water and waste management. Most of the parks are highly manicured, fenced and equipped with rigidly placed plastic play structures which interfere with the connection between children and nature. They are fostered with non indigenous trees and plants which are at odds with the local climate; local birds can’t nest in it and they consume lot of water. This paper establishes the immediate need to rejuvenate our parks and their sustainable nature and aims to bring them closer to the children of the city. The paper shows how ‘future sustainable cities’ can convert existing parks into Permaculture parks and make it access friendly for people of all ages. It also establishes the need for today’s cities to plan for new Permaculture parks where vegetables are harvested and local indigenous plants, herbs, trees and live stocks are grown.

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P-0358 (PPS C45-2)

Ecosystem-Informational Approach to Environmental Performance of Building Envelope and Occupant Behavior

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Keywords: information, resilience, resilience, energy, environmental performance, human behavior

This study suggests a new framework and indices of building performance evaluation based on an ecosystemic approach. The energy-efficient building construction and operation are important to achieve sustainability. Nevertheless, efficiency does not fully account for the building’s complex environmental phenomena in which nature, art, and human living are inseparably involved. In particular, increasing efficiency cannot clearly associate the robustness and stability of building's internal energetic
organization (and trade-offs between energy efficiency and material use) with building form and occupant behavior. Based on ecosystems theory, this study defines building as a thermodynamic system that utilizes, transfers and self-organizes the useful environmental resources—energy, material and information—through an emergy (spelled with an “m”)-networking process. The definitions and formulas of information measures and ecological indicators from Shannon’s information theory, Ulanowicz’s ascendency principle, and Odum’s maximum empower principle are discussed and adopted to develop a new methodology of integrating building information and emergy and a systemic model of building energy flow. Findings demonstrate that buildings self-organize internally, like ecosystems, with inputs and outputs of the resources. This eventually suggests that increasing complexity, total information, and power be the final goal of building sustainability and environmental building design.

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P-0206 (PPS C46-1)

Discussion on the Design Method of Waterfront City of Dalian Hekou Bay From the Angle of Water-enjoyable-space Construction

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Keywords: urban, waterfront space, urban design, city and nature, Water-enjoyable-space

In order to solve the problem of lack of Water-enjoyable-space or ecology in urban waterfront area, taking the urban design of Hekou Bay District in Dalian as an example, this paper analyzes the visibility and perceivability characteristics of Water-enjoyable-space, and puts forward three aspects of waterfront city design method: divide space, control water body shape, design waterfront landscape. Hoping to provide the necessary theoretical support for the harmonious coexistence of cities and nature, as well as the design of waterfront cities.

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Nature / 8. Architectural Technology

P-0754 (PPS C46-2)

Strategies For Implementation of Integrated Prefabrication Technology in Small Scale Isolated Buildings

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Keywords: Prefabrication, integration, sustainability

As a developed technology, prefabrication is widely used in the field of industry for its organized and efficient work process. Yet up to now the progress in the architectural field in China is limited. With the increasing labor costs, architecture will have to get rid of the dependency of large human sources, which makes prefabrication one of the most practical solutions. Given these situations, this article discusses specific technologies of prefabrication in buildings. The article includes following respects. First, Integrated prefabrication in designing—learning from industrial productions. Taking several industrial productions as reference, analyze what benefit can be gained through the separation of
manufacture and combination, and list the conclusions respectively in architecture. Second, Integrated prefabrication technologies in architecture and structure system. Based on the analysis of proposals of SD competitions, specific changes from current work process are depicted, and relative profits in resources, costs and efficiency are discussed. Third, Equipment system integration and full life cycle operation. The article summarizes equipment necessary for a sustainable prefabricated building, including solar photovoltaic system, reclaimed water system and ventilation system, followed by the methods of integration and their feasibilities.

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P-0897 (PPS C47-1)
Design Agent-based Real-Time-Scenario Planning and Benchmarking For Salutogenic Environments
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Keywords: -

Roughly millions of patients every year contract worldwide infections while undergoing surgery, according to the International Centers for Disease Control and Prevention. For example, those infections cost billions of dollars in health-care services and millions of lives annually. Ironically, while hospitals are supposed to be designed to promote healing and well-being, they can be one of the most stressful of all built environments—they're often cold, sterile but also infectious, featureless, crowded, and noisy. They same issues apply for other building types for health, well-being and even for education. In recent years, medical communities around the world have been incorporating a more salutogenic approach by reemphasizing the vital importance a healthy and active lifestyle has on one's overall physical and psychological health. This move to a more preventative model is even seen in the World Health Organization's new definition of health: “a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity.” As salutogenesis became firmly embraced by physicians and healthcare professionals, the concept began also to multiply into the professions of architecture, design and engineering. It is also more and more integrated in many green building rating institutions and rating system such as the USGBC-LEED, Green Globe, the German DNGB, and the Japanese CASBEE or in the UK BREAAM system.

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P-0299 (PPS C47-2)
A Study on IoT Technology Application For Environment-friendly Sustainable Urban Architecture
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Keywords: urban architecture, IoT technology, environment-friendly, sustainable, user awareness

Urban development is often associated with the destruction of the natural ecological environment. Current research on environment-friendly sustainable urban architecture introduces a variety of
technologies through active utilization of IoT (Internet of Things) technology. However, there is a lack of research on application strategies and performance verification for suggestions that demonstrate performance depending on changes in the real environment. This paper conducts environment-friendly performance based on the suggestions of IoT technology applied with user awareness technology for environment-friendly sustainable urban architecture. IoT user awareness technology is distinguished according to the method of biometric data recognition and communications, and a suitable technique is applied depending on the purpose of the service. While biometric data recognition has the highest accuracy among the methods of IoT user awareness, it also has downside in that it is difficult to use in various fields for it requires user behavior during the recognition process. On the contrary, the communication method does not require user's direct behavior. The current study found that IoT technology is suitable for environment-friendly sustainable urban architecture design as the technology helps with conserving energy in urban architecture and ecologically sustainable environments.

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Nature / 11. Others

P-0183 (PPS C48-1)

The Tower and Sphere of the Contemporary Architecture

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Keywords: ecological balance, tower, sphere, social development

There is some phenomenon that existed in human social activities just like maintaining a dynamic ecological balance in nature, and this kind of situation also happened in the human construction activities. There are two different kinds of architectural prototype: One is like the spire of the tower, it indicates that the advances and breakthrough, represents a kind of ultimate pursuit; another is generally spherical and rounded, as re-presentation of context and the universal need. It represents a broad and comprehensive architecture, and it accords with common needs due to its vast influence. There is a balance between these two kinds of architectural prototype. When the phenomenon develops to a certain degree, it starts to move toward the opposite direction. It will no longer be keen when the spire is driven by excessive human desire, and it will become difficult to break through the limitation of architecture. The sphere will become incomplete and will not be able to take care of its responsibilities if the universal request is not taken into consideration. This may be a kind of interpretation of contemporary architectural development. We want to study the prototype of the tower and sphere, so that we can go through the phenomenon from the perspective of ecological or sociological thinking to understand the causes of the contemporary architecture.

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Open Topic / 1. Architectural History

P-0552 (PPS C48-2)

Displacement of the Geungnakbojeon Hall of Muwisa Temple Corner Pillars: A 3D-Scanning-Based Study

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Keywords: muwisa geungnakjeon, 3D Scanning, wooden structures, displacement of the corner pillars

This study aimed to verify the displacement likely occurring in wooden cultural-heritage structures, by using 3D scanning technology for the vulnerable locations and main wooden members, and to compare and analyze the data to investigate the specific patterns in the change over time and verify the displacement that occurs to the structure. The selected target was the Geungnakbojeon Hall in Muwisa Temple in Gangjin, South Korea, and the selected displacement measuring site was the corner pillars that are the location subject to the greatest eccentric load of roofing in Korean traditional wooden cultural-heritage structures, hence the most structurally susceptible location. The patterns in the leaning of the upper part of the pillars serve as the most definite indicator of the condition of upper-structure. The study aimed to analyze the factors contributing to displacement through systematic measurement of displacement using 3D scanning, considering the characteristics of such wooden structures. Furthermore, the study sought to improve academically as well as technically the way displacement in wooden cultural-heritage structures is carried out, specifically by improving major wooden cultural-heritage structures’ periodic inspection, precision survey, and safety diagnosis. The intention of the study was to provide the basic data for displacement measuring methodology and offer foundation for securing basic status analysis data for researching repairing and reinforcing strategy to better respond to displacement that is occurring in wooden cultural-heritage structures.

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Open Topic / 2. Architectural Theory

P-0790 (PPS C49-1)

Self-healing Recovery of Community in Kricak Kampung, Yogyakarta, Indonesia

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Keywords: self-healing, recovery, community, kampung, co-design

The majority of Kricak Kampung residents depend on physical and rough works. Most of the youth are unemployed and built the habit for gambling and drunk. Lots of immigrants from outside the city come to venture in the kampung. Nowadays, Kricak Kampung develops into a populous slum area occupied by both the locals and immigrants. Most of them live in a small house made of plywood or bamboo wall without windows and toilet. A house of size 25m² could make up for three families where most of the house located on the banks of Winongo river. However the kampung has prospective on the community diversion and activities based to the diversity of the residents’ background. This strength is the core strategy for the kampung development concept where co-design method used as an approach. The method emphasizes collaboration with residents’ participation through the supervision of the architect.
The resident will put into responsibility as people’s agents. Thus the community independently redevelops their informal space, disassembles, and rebuilt the region collectively. They will be the developer based on guidelines specified by the architect. The residents are expected to be competent on determine their own requisite to create a sustainable region.

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P-0659 (PPS C49-2)

The New in Ancient and the Old in the Countryside--Exploring the Relations of Construction and Human Relations of Chinese Rural Edge

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Keywords: rural construction, old building renovation, contradiction, soul of city

Transformation and renewal of urban rural areas are prolonged, more and more architects are on the edge of the city to carry out the construction and renovation of the symbol of the spirits and dreams. The understandings about rural construction are also in pursuit of the soul and the experience in the homeland. Based on the countryside transformation projects which the author experience, Fanjing Mountain Tourist Center, this paper attempts to theoretically put forward ‘Architecture update achievement’ as tool and link. Through discussing the existing rural concept model, history environment, construction strategy and consequence. Exploring and thinking about the problems and contradictions. By recording the process of countryside transformation projects about Fanjing Mountain Tourist Center, the essay reveals resistance which comes from the poor rural environment and traditional ideas during building in the urban fringe area. The author involved in the construction and communicated with local residents, extending the scope of the architect’s work to the design of the mind, to show the possibility of the rural construction activities. Letting people and buildings reconciliation in a more positive way.

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P-0600 (PPS C50-1)

From Netherlandish Open Building to Chinese Centurial Housing

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Keywords: open building, centurial housing, design principles, case studies

In the 1960s, Habraken from the Netherlands proposed the idea of Open Building, and had explored a range of design principles such as hierarchical systems, "Zones and Margins", and "Component Industrialization". European countries took a lead in this theory and design principles to carry out practical activities and spread it to North America. In Asian countries Japan is an early start on related research. Japan incorporating the Open Building and its national conditions expanded originally KEP infill system which is dedicated to the content of the residential industrialization and wanted to develop the special centurial housing. As for China, after accepting the idea of Open Building, architects and researchers made some attempts on “Support–Infill” system. In order to speed up the process of housing industrialization and promote the sustainable development of the residential construction, Chinese Centurial Housing was developed. By using the method of comparative case studies, this paper analysed the application and developments of Open Building around the world and summarises the characteristics and criticisms, hoping to provide references for the future development of Open Building in China.

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P-0354 (PPS C50-2)

Designing High Density Artificial Building Environment For Small Towns in China

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Keywords: small town and residence, high density artificial building environment, mixed-use, scale, ratio between commercial area

Introduction: Influenced by the China’s rapid urbanization process on an unprecedented scale, small towns’ construction pattern represents an abominable tendency following the metropolis. A typical example is a large number of high residential buildings and shopping malls being built or under construction. Background: The tendency of small towns’ urbanization leads to some unnecessary overloads from the aspect of convenient services, public transportation, urban management and people’s livelihood improvement. Which, as a consequence, aggravated restless and panic emotion among citizens; force residents to live in toil and distress; exacerbated the turmoil and anxiety of a city environment, on the other hand detrimental to the active living. Objective: Providing the design theory of high density artificial building environment to guarantee the habitability and prosperous in small towns of China. Data Collection: Collect the data on neighborhood scale, building volume and street scale by literature review. Design Strategies: for high-density artificial building environment: 1) Improve the ratio between commercial area and residence. 2) Control the architecture scale and organize the neighborhoods with human scale. 3) Multifunctional public plaza design. Design Methods: 1) Multistoried mixed-use building 2) Humanized street design. 3) Mixed-use plaza functional design. Conclusion: It’s necessary to coming up the design theory of high density artificial building environment in perspective of architecture to rectifies the incorrect metropolitanzed tendency and provide prerequisites along with active guarantees for the prosperity and stability for small towns in China.

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Open Topic / 3. Architectural Planning and Design

P-0726 (PPS C51-1)

The Category Research and Current Situation Survey of Existing Housing in Dalian

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Keywords: multi-family housing, typical category, current situation, renovation

Until the end of 2014, the urban housing stock in china is more than 20 billion square meters, and about 50% of housing stock built between 1980s~1990s. However, most of these housing are now facing urgent need of renovation to address technical deterioration, high energy use, deficient accessibility, as well as poor in-door and out-door climate. In order to research the possible approach of renovation, it is important to gain the knowledge of the historical and current situation of the housing. This paper is built on the analysis research of 215 existing housing building drawings between 1980s and 1990s in Dalian, as well as spot survey of typical housings. The conclusion present the category of building group layout and households unit combination, also show the current situation of typical category. This research provide reference value for the further renovation research of existing housing.

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P-0507 (PPS C51-2)
Study on the Design of Emergency Entrances For Hospitals Evidence From Extremely Cold Regions -- Urban Healing Transition Space
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Keywords: extremely cold regions, emergency entrance optimization, behavior analysis, medical quality, humanistic concern

This paper investigates the design of emergency entrances for hospitals in extremely cold regions. The aim is to achieve the solution to the problem of transitional space for patients from outdoors to indoors. The main research methods used in this paper are behavioral analysis and other research methods. The study of evidence on the existence of potential problems would supply guidance for the improvement of actual emergency entrances, contribute enormously to the development of emergency department of modern hospitals and build up a rescue process with comfort and efficiency, alleviating pain of patients and saving rescue time. The results would also set an example for the design of emergency space in the future and supply theoretical significance and practical guidance. Based on the city, the emergency medical treatment of the “rapid urban lifeline” process, the completion of the “physical space” to “human space” exploration.

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P-0409 (PPS C52-1)
A Development of the Healing Environmental Index For Mental Health Enhancement
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Keywords: mental health, healing environment, positive mental health, mental health enhancement

Mental health is the concept that includes the quality of human being’s Well-being and built environment is an important subject to support mental health enhancement. Healing environment is a positive concept that realize mental health enhancement. The purpose of this study is to build the concept of healing environment for mental health enhancement and to develop the environmental index. The methods of this study are method of theoretical consideration, analytic method of the Index and composing a pool of the analogous index of healing environment. This study had some frames of establishing healing environment that is, Keyes’ Positive Mental Health Model + Maslow’s Hierarchy of Needs Model. This study had the basic classification of Healing Environment Index for mental health enhancement is as follows. 1) Environmental Criteria 2) Physical Criteria 3) Spatial Criteria 4) Emotional Criteria 5) Cognitive Criteria. And the ultimate purpose of healing environment is to recover the self-esteem and to achieve the dignity of human beings.

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A Study on the Spatial Coupling Relationship Between Urban Complex and Public Transportation Based on Vitality Orientation——The Comparison of the International Finance Center Between Shanghai and Hongkong

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Keywords: high density, urban complex, public transportation, spatial coupling, comparative analysis

Based on the perspective of urban vitality, this paper analyzes the necessity of coupling the urban complex with the public transportation and the composition of the coupling relationship, and discusses the basic characteristics of the spatial coupling between them. And through the comparative analysis of the case of the international financial center (IFC) in Shanghai and Hongkong, the qualitative and quantitative studies on the spatial coupling are carried out to explore the design factors which influence the spatial coupling relationship and to draw conclusions.

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Behavioral Characteristics of Children at a Children’s Hospital - Focus on Children with Physical Disabilities

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Keywords: user behavior, children’s hospital, physical disabilities

This is a pilot study aimed to investigate users’ behavioral characteristics in a children’s hospital in Seoul, particularly focused on child patients with physical disabilities. Fifty children under the age below 12 years were observed, while waiting, resting, or playing before and after doctor’s consultation or physical exercise therapy at the three major outpatient’s common spaces in the hospital such as the lobby, the waiting area in the pediatric department, and the play area in the rehabilitation department. The children’s general information such as a gender, an age group, and the presence of an adult patrol or a sibling were collected. The male (80%), 5-7 years (36%) and 7-9 years old (38%) in the age group, and parents in accompany (84%) were the most common cases of the children. Then, four behavioral characteristics such as a physical, emotional, cognitive, and social type and associated detailed behavioral activities in each type were analyzed in relationship to a space where the behavior took place, design elements facilitated in the space, and a time lapse when the behavior lasted. The intent was to find out not only the most frequently occurred behavioral types and activities, but also to examine certain spatial conditions that may be supportive of the children’s behaviors when using the space and design elements. Absence or insufficiency of spatial elements were also investigated that could be necessary to afford diverse behavioral types and activities especially by the children with physical disabilities. As a result, the physical (48%) and the cognitive (33%) behaviors were the most frequent behavioral types in all three outpatient spaces, whereas the emotional (8%) and the social (10%) behaviors were not observed sufficiently. Children with physical disabilities showed the most fundamental behaviors such as walking (25%), standing (21%), and sitting (20%) in the physical behavior category, watching (44%) and touching (32%) in the cognitive category, and smiling (74%) and talking with parents (100%) in the emotional and social categories respectively. Also, their behaviors were tied to basic design elements such as seating, tables, and corridor facilities. However, an alive animated design element such as the fish tank in the lobby, a tree column in the waiting area in the pediatric department, and book shelves in the play area of the rehabilitation department were associated with diverse behavioral activities. Based on the result, the ways to improve spatial design conditions were discussed to afford diverse behavioral types and behavioral activities that may enhance therapeutic experiences for children with physical disabilities in the healthcare setting.

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P-0126 (PPS C53-2)

**Soft Architecture and Slow City**

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Keywords: soft architecture, slow cities, humanity, environment, public space

With the rapid development of urbanization process in the world, more and more people are aware of the problem of being greedy for big and fast in the process of city development. The exact way to solve this global urbanization problem, and improve the quality of the city, is to slow down the pace of urban development. Use the soft strategy of building, reduce the rhythm of the city, so that people can have a stop, rest and communication, feel the happiness of the city and the building. Soft architecture mentioned in the paper is not traditional buildings which show curved, organic and fluid characteristics in form and apply soft materials or are wrapped in the image form. Soft architecture emphasized in the paper refers to buildings which can offer cities and public activities with humanized places and urban buildings which enjoy open interfaces, shared public space and rich humanistic spirit. Through the concluding of the characteristics of various types’ soft architectures, we propose the manifesto of the soft architecture here — a kind of space design strategy that intervene the pace of city. We hope that the architectural designs have nine different attributes such as open boundary, high-quality sharing space and more social responsibilities, which direct at the more concentrative places of people’ activities. The rising of the “soft” architecture indicates the development of the city changing from the quantitative changes into the quality improvement. The architecture is the most intuitional manifestation of the image of the city, which make the transformation process shoulder more and more responsibilities.

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P-0100 (PPS C54-1)

**Study of the Publicity of Exterior Space in a Mixed-use Complex**

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Keywords: mixed-use complex, exterior space, case study, accessibility, amenity

The exterior space in a mixed-use complex possesses strong intermediary properties and can effectively connect various architectural programs. Therefore, it improves the value of architecture and provides good outdoor public space for residents. In modern cities whose public spaces are gradually being occupied by transportation, e.g. motor vehicles, high quality exterior space in a mixed-use complex can provide an attractive place for residents to rest, recreate and socialize. Nevertheless, the use efficiency of exterior space is low in some cases because of its closed configuration. As a result, some mixed-use complexes lose both the spatial charm and attraction of public spaces in the city. The question of how to construct energetic exterior spaces and promote their publicity was studied in this paper, and a case analysis of the accessibility and amenity of a mixed-use complex was carried out. The object of this study is the Jiangwan-Wujiaochang complex in Shanghai. A site investigation in this case was conducted, and several study methods, including counting, mapping and tracing, tracking, photographing and test walks, were comprehensively used to implement qualitative and quantitative studies of exterior space in the mixed-use complex. The quantitative research involved people using exterior space, the number of people passing through and staying, the speed of walking through, staying time, etc., and the qualitative research involved the shape of the space and patterns of use. Activating the exterior space in a mixed-use complex can drive the use efficiencies of its various functional spaces.
and realize the sociological, ecological and aesthetic values of the exterior spaces. Thus, both the possibility of operating a project successfully and the required social publicity can be improved.

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Open Topic / 4. Urban Theory and History

P-0725 (PPS C54-2)

Autonomy of Architecture, Architecture of Autonomy

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Keywords: autonomy, architectural education, ontology, community, subject

This enquiry into ontological experience of space and architecture is aimed at illustrating the relationship between the architecture itself and the subject within. Analysing Otto Friedrich Bollnow’s writing and Louis Kahn’s sketches determine the principle idea towards architectural autonomy, which allows changes within the architecture itself. Simultaneously, keeping in mind the that architecture and the city holds a collective consciousness towards future changes, the paper interprets the works of Michel Foucault and Richard Sennet permitting illustrations towards the limitation of centrally organizing the subject and the institutionalized entity that determines the city and architecture. Inferring the problem of centrally organized systems and promotion of singular monumentality in architectural practice and education, this discussion attempts to reveal the embedded concept of duality, whilst reinterpreting the relevance of early modernists’ works and questions its relevance and application to current practices and architectural education.

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P-0401 (PPS C55-1)

A Study of the Use of the Gwanghwamun Square through the Evolution of the City Structure of Seoul

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Keywords: the gwanghwamun square, city structure, temporal change, urban use, strata

The Gwanghwamun Square, as located at the center of the metropolis Seoul, has been the central arena of Korean history since it was designated as the Main Street (Yookcho Street) in the Joseon Dynasty. For almost six centuries it has played a role as the key area where multiple strata of everyday life are complexly accumulated. Instead of simply considering the Square according to function and spatial typology, this article proposes to investigate how the Square and its adjacent urban fabrics have been used in an integrated manner, from which to look at how the accumulation of urban strata influences ways in which people experience and make relationship with the Square in non-predicated settings. The findings illustrate that the Square has not so much come into existence in a random way but rather been generated out of the continual accumulation of multiple urban strata for more than six centuries. Furthermore, this article shows that the Square has functioned in multiple ways in each specific time period, as well as with varying names that reflects its differing political moods and economic conditions.

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The Trace of the Vanquished

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Keywords: trace, street art, enchant the city, urban practice

Are cities the exclusive expression of the dominants? Revisiting the characters of the "vanquished", we figure out they left more in the dense web of behaviours than the self-proclaimed winners. And what does "trace" mean? According to Derrida, a parallel universe of signs, concepts, emotions existing with their own life, not a process of formerly built objects leaving shadows. The "Commune of Paris" upheaval's short life during the 1871 spring could not stop the new Paris of baron Haussmann and the already anchored spirit of capitalism; No building was erected, no street designed, no urban theories were invented and left; And though, it still exists, embedded in the soul of the city, fermentation permanently reactivated by the same ingredients: resistance to social violence, urban space as one-and-not-exclusive component of people's life and practices. The "Butte-aux-Cailles" ("quail hillock") district, historic resistance nest of the "Commune" cultivates its memory and subtly supports its spirit through its long-lasting practice of street art and urban signs. Beyond this modest example, it shows new ways to read urban structures: the soul of the city is also 'the trace of the vanquishe..."

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Open Topic / 5. Urban Planning and Design

Suburban Regeneration Based on Entrepreneurs Participation – Case of the Metropolitan Area Gdansk - Gdynia - Sopot (MAGGS)

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Keywords: urban regeneration, suburban area, entrepreneurship, polish suburbanization

The Polish suburban zone structure is very fragmented structure and has a high indicator of entrepreneurship (SME - small and medium enterprises). Today suburbs are challenged by dynamic development and lack of investments in the public spaces and infrastructure by local authorities. This causes spatial chaos of urban residential structures and isolates them. The growth of the SME sector in connection with suburbanization processes has led the Authors to focus on SMEs involvement in the development of public spaces in the suburbs. The first aim of the paper is to present the authorial method of research on suburbanization process in Polish unique circumstances. The second aim is to present the role of SMEs as in regeneration of Polish suburbs. The used methods include constructing a research model for determining the characteristics of suburbanization and a questionnaire survey with the local entrepreneurs. The example of a regeneration project in suburbs in...
Gdańsk-Osowa will be shown, created by cooperation between local residents and entrepreneurs, leading to a boosted creativity resulting in changes in the surrounding space.

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P-0392 (PPS C56-2)

Contextual Factors Influencing Successful Public Place Making: in Case of Public Plazas in Dhaka City

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Keywords: -

Urban Plaza as major public spaces are considered as the core of cities around the world. Dhaka city with its huge population could not provide enough plaza for the city dwellers as well as they are not carefully designed for accommodating this density and some are still in the process of amelioration to meet the user's need. The standard of making a great public place has become nullified when upon lacking in many aspects of key attributes found by 'Project for Public Places', those plazas in Dhaka city are relatively vibrant compared to other public places around the world. In many research, the high density has been taken as a problem which cannot be solved and by keeping it in background or ignoring it, many design research has been come in conclusion. But now it is considered that density is essential to urban life and there are a number of benefits from higher development densities which mostly present in the urban plazas of Dhaka city. In the era of expeditious urbanization, the population will increase gradually and need of public plazas for a healthy urban life will become mandatory more than ever. In this context, the main aim of this research is by taking the high density as a prime and given factor, firstly to find the reconsidered factors for what makes a successful public place in context of Dhaka and secondly, to create a comparison standard of the factors influencing successful place making. At first extensive literature review has been done for comparing the factors that make different public places around the world a successful one. Second, four Urban Plazas is investigated by systematic observation and behavioral mapping. And then, this local findings are compared and analyzed opposite to the other successful public –places. The outcome of this phase generalized some specific factors of Urban Plaza which stimulates activity in every plazas as well as some contextual intangible attributes in Context of Dhaka city.

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P-0075 (PPS C57-1)

Actionscape

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Keywords: actionscape, citizen, environment, design, flexibility

"Actionscape" is defined as a movement that seeks to actively connect the viewer, or citizen, with the stage, whether it is an urban or natural environment. Places where to develop diverse actions. The landscape, the environment in which we move, thus becomes a flexible element that can be altered by the citizen himself. Actor and owner of his actions, the citizen has the capacity to transform his reality, individually or collectively. By small scale actions, defined as scale one, intermediate size called scale two, or finally as large scale actions, scale three.

The role of the architect or the urban planner in these actions is fundamental to guide and organize the ideas and desires of the citizens. Its function is not only to propose an idea, but to listen and observe
what happens in its environment, to propose, from the discipline of architecture, strategies and tools that allow the "actionscape" proposed by the citizen to be done in a much more intense way. The design of the cities must incorporate the demands of its users, the citizens, in such a way that when they are implemented, they are themselves who can actively participate in many of them.

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Open Topic / 7. Environmental Design and Theory

P-0885 (PPS C57-2)

Optimization of High-rise Residential District Planning Based on Air Pollutant Impact: a Case of Harbin City

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Keywords: optimization, high-rise residential district planning, air pollutant, harbin, winter city

Harbin, as a typical winter city, has a unique climate characteristic, low temperature, less wind, and long heating period. More extreme weather occurred, and air quality has been deteriorating for several decades. Meanwhile, high-rise residential district grown quickly, and has complex wind environment. Wind environment is the decisive influence factor to air pollution. Research object was the high-rise residential district layout, research point was wind environment, and the research process was to explore how the wind environment affects air pollution dispersion. With these methods, such as Computational Fluid Dynamics (CFD), Least Cost Path(LPC), and statistical analysis, this paper firstly analysis wind corridors of the whole city, secondly summarizes sixteen different layout models to research diffusion situation, and thirdly selects two typical high-rise residential districts to simulate wind field, analyzes natural corridors, artificial corridors openings and building height. This paper gives several conclusions. First, natural wind corridors and artificial wind corridors must have a complete system, which should be strictly controlled. Second, increased building opening size and widened distance between buildings can accelerate air pollutant diffusion rate. Third, building heights should be gradually increased from city outskirts to city center, appropriate combination of different heights can form good wind corridor.

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P-0871 (PPS C58-1)

A Study on the Regeneration of Safe Village Reorganized by Crime Prevention Through Environmental Design
-Focused on Wall Removal Project-
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Keywords: urban regeneration, CPTED(Crime Prevention Through Environmental Design), wall removal, local community

Old residential areas become decadent and declining to vulnerable environments. Increased crime rates in the region have a negative impact on quality of life, the city's identity is also transformed into a destructive environment. As a result, the city becomes a ghost city by increasing the hollowing of the city. The regeneration of the old housing area gives the competitiveness to the declining area, the quality of the poor living environment is improved and the identity of the city coexisting with humans is maintained. CPTED(Crime Prevention Through Environmental Design) in the old housing area of the city is becoming important as a part of urban regeneration. By eliminating the possibility of crime by improving the environment, It is the basis for activating local communities. We will investigate the effectiveness of CPTED and Wall Removal Project to improve parking problems and street environment in single residential areas, and analyze the synergy effect contributing to the urban regeneration to the improved residential environment of the constructed safety village.

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P-0407 (PPS C58-2)

Influence of Architecture Landscape Environment on the Pedestrians’ Behaviors of Visualizing the Traffic Lights When Crossing the Road

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Keywords: veritable scenario, crossing the road, visual fixation behavior, traffic lights

In this paper, by the eye-movement experiment, the influence on the pedestrians’ behaviors of visualizing the traffic lights when crossing the road from the different architecture landscape information on two sides of the road was explored. The veritable environment was observed as the object in this paper. Because of the significant difference between the architecture landscape information on two sides of the road, we the road junction of the Hunnan east road between the north gate of the Shenyang Jianzhu University and Golden Amber World was selected. Two independent variables were set, which were the complexity of the background architecture landscape and the contrast intensity between traffic lights and the environment brightness. Also there were three dependent variables, which were the reaction time, duration and the number of the fixations in the interest region of the traffic lights. Meanwhile the traffic flow and the subjects’ gender were under the control, which were unrelated variables.

The experiment showed that the main effect of the contrast between the traffic lights and the background brightness was not significant in the aspects of the dependent variables. The complexity of the background architecture landscape had significant effect on fixation numbers. Besides to fixation duration, it had extremely significant influence. However, as for reaction time, it had little impact. On the other hand, the interactive effect between two independent variables was not significant in the dependent variables.

In conclusion, the authors think that the reason for all the phenomenon above is the pedestrians’ fixation behaviors were regulated under the cognitive psychological effects in the complex environment. The traffic lights attracted more attention of the subjects within complex environment, which made the reaction time shorten. Corollary is that people often regulate their fixation behaviors to adapt the
interference from the different building environment background factors, which determines the reaction
time to the traffic lights.

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P-0227 (PPS C59-1)

An Brief Analysis of the Relationship Between the University and the Surrounding Residential in Dalian Based on Space Syntax

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Keywords: universities, residential area, space syntax, organizational relationship

With the development of higher education in China, the scale of colleges and universities in the city is expanding rapidly. The original residential area around the University limits the expansion of the university campus to a certain extent. Some residential areas have been submerged by the expansion of the campus, some residential areas have formed the insert type in the campus of the University, and other residential areas surrounded by university campuses. The existing correspondence has formed a series of problems, such as management confusion, complex personnel and behavior. The author thinks that the correspondence between the University and the surrounding residential area has three kinds of States, namely, mutual integration, part of the intertwined, completely isolated and so on. Found by field investigation that the vitality of the corresponding regions of the three states are different. This paper takes the Dalian University of Technology as an example, using the theory and method of space syntax, analysing the spatial relationship between University and residential area. In the end, trying to establish a kind of spatial organization that can make a better development of the University and the residential area, enhance the vitality of the University and its surrounding residential areas, and create a harmonious and beautiful urban environment.

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P-0062 (PPS C59-2)

An Organic-Architectonic System and the Quantitative Indicator of Open Space Situation in Urban Progression of Dhaka

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Keywords: eco system, eco-design, open space, ecological footprint, built environment

The paper attempts to have a searching look into the unhindered expansion of urban areas in the most developing countries as it happens in Dhaka the capital city of Bangladesh. The paper has therefore dealt at length on the significance and importance of green and open spaces in the interest of developing cities. The various sections of the paper delineates the „Organic-Architectonic system having special reference to the importance of biodiversity contributing to the natural and social sustainability. The misnomer of „development” in name of „economic return” leading to unbalanced state of biomass has threatened the very existence of human habitation and as such the very existence of living and non-living species. An ecosystem is a distinct area in the biosphere, where living and non-living things interact within and between each other to produce a sustainable environment. In a nutshell, the eco-design is designing the built environment as a system considering the ecological footprint of the area. The outlook on urban quality is changing nowadays, as a part of general shift in cultural values. The need for change is primarily a result of the continuous process of intensification of land use. Openness has become an important issue in Dhaka today. The purpose of this paper is to assess qualitative parameters of dynamics of the urban open spaces, thereby enabling the designers to
understand the contribution of open spaces in densely built environment of Dhaka. The study identified the causes of deteriorating urban environment at Dhaka to that of the lack of public awareness towards living and non living species.

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Open Topic / 10. Computational Design & Digital Architecture

P-0855 (PPS C60-1)
Tracing Gangnam: Towards a Theoretical Model of the Superblocks in Gangnam
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Keywords: gangnam, superblock, urban structure, theoretical model, parametric schema

A theoretical model of the superblocks in Gangnam is presented in the form of a parametric schema. The grounding of the work presented here is based on the historical aerial photographs of Gangnam documented by the Seoul Metropolitan Government since the early 1970s and archived at the National Library of Korea. A brief survey on the aerial photographs foregrounds two particular superblocks. The superblocks commonly reveal a unique urban structure that features a highly differentiated configuration of diverse internal streets in terms of their centralities. Significantly, the structure integrates various scales, shapes and orientations of interior blocks, prevents internal segregations and provides coherence to otherwise perplexing urban localities. The street networks and interior blocks of the two superblocks are traced to analyze their development processes and current structures. A set of formal principles is postulated from the analysis to form a theoretical model of the Gangnam superblocks. The model is employed to generate a set of parametric variations of Gangnam superblock design that reflects upon the theoretical implications of the existing superblocks and inquire their potentials as a newly emerging model of contemporary urbanism at large.

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Open Topic / 11. Others

P-0699 (PPS C60-2)
Open Vertical Housing in Airport City Kulon Progo, D.I Yogyakarta, Indonesia
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Keywords: social interaction, vertical housing, open design

Yogyakarta Special Region is one of the provinces in Indonesia which has diverse cultures, tourism, and education. The government is currently undertaking the construction of an international airport located in Kecamatan Glagah, Kulon Progo, D.I Yogyakarta, Indonesia as an integrated transportation facility. In the master plan of Kulon Progo Airport, there is a development of the urban area of the airport and the people affected by evictions will be relocated to vertical housing. Adaptation to the environment between humans and the natural environment can give birth to a new social structure called social interaction (Bungin, 2006). The method used is Open Design, because the idea of designing the
environment is a product that continues to run with a design process that never ends until the
environment changes as part of the design, in the form of function, spatial dimension, circulation,
infrastructure installation, and thermal comfort (Husna, 2014). The purpose of this research is to
produce vertical housing design principles that can accommodate horizontal social interaction. To
create commercial activities in this building, it will be integrated with local site characters such as
wetland paddies and forests that will be processed into high value products. Thus, people do not lose
their livelihood because most of the people are farmers.

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P-0422 (PPS C61-1)

Study of Transformation From Vernacular to Modern in Materials—Taking the Prototype of
Vernacular Seaweed House and Its Interpretation of the Big Dipper Mountain Villa in
Rongcheng City by Tongji University as Case Study

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Keywords: vernacular, modern, seaweed house, transformation, materials

With fluffy seaweed roofs and natural stone walls, the seaweed house distributes throughout the
peninsula of Jiaodong in RongCheng City of Weihai in Shandong Province of China represents a rare
ecological vernacular dwelling influenced by marine culture. With excellent enduring capabilities and
fire-resistant functions, the seaweed material on roof makes people feel warm in winter and cool in
summer. The value can be summarized in that the modern transformation of traditional vernacular
architecture is gentle and self-made, and we can draw a conclusion that the material has been
transformed from natural to artificial, increasingly modernized and exotic.

Facing the vanishing of the vernacular seaweed dwellings, we are obliged to protect them, but we face
the problem of what to persist and what to be removed. Also, since we cannot stop the progress of
modernity, to abstract from the old in the new interpretations and to preserve its values, become crucial
issues to be discussed and solved. How to absorb the values of materials in respects of ecology safety,
economy, sustainability and the requirements of modern people; and to apply them in plan, details,
construction of structure and the integration in landscape, making transformation into a modern one
with traditional souls in it, are the main questions for this research.

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\textbf{Keywords: Low carbon, Tianjin Eco-city, Ultra-low energy consumption buildings, Zero carbon life}

Zero carbon city is a future of sustainable city. We have made a series of ultra-low energy consumption buildings in Tianjin, China. The energy consumptions of these buildings are only 1/3 to 1/2 of conventional energy-saving buildings, indicating a step toward zero carbon life by virtue of technology integration. Work: A kind of innovative super energy-saving surface is designed for Exhibition Center to realize ultra-low energy consumption together with use of renewable energy. Education: Passive technologies are used for School to create green school, with special focus on green space and green education. Residence: Super thermal insulating walls, windows are used for residential buildings in Sino-Singapore Tianjin Eco-City, and all residents are provided with hot water heated by solar. Sport: Unique shape is designed for fitness center of Tianjin Eco-City to make active response to the climate. In addition, renewable energy HVAC systems are used to achieve ultra-low energy consumption and standardized construction approach is used to realize low carbon emission in full life cycle. Relaxation: Zero carbon garden, which is a temporary construction near the residential, have become the place of citizen to go for a casual walk. Experiment: Tenio Green Design Center is a demonstration model of operation with ultra-low energy consumption. By virtue of advanced technologies used in design and construction and the adjustable green operation mode, the total operational energy consumption is 40kWh/m\textsuperscript{2}\textbullet a and HVAC consumption is 19kWh/m\textsuperscript{2}\textbullet a, so that the objective of ultra-low energy consumption is realized. All the above-mentioned buildings achieved good objectives of energy consumption, and two of them won respectively a golden prize and a honorary nomination of sustainable architecture awarded by ARCASIA. Combination of zero energy consumption integration technologies and the concept of single-planet living will lead us from ultra-low energy consumption to zero carbon.

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An Office Building in Hardwood

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\textbf{Keywords: Low Office Building, Timber Construction, Hardwood, Building Material, Beech Products}

This three-storey building, constructed in timber-frame system with beech, is the head office for euregon AG, a software developer. Centrally located in a green park of Augsburg in Germany, the whole office environment is bound with a livable atmosphere. Office rooms for enterprise management, customer support and development as well as training are disposed neatly on three floors with overall 1,335 m\textsuperscript{2}. The building is structured with 5.1 m deep office rooms both to south and north, and a 2.4 m wide aisle, where there is a strand of supply pipes for ventilation, heating and cooling over the suspended ceiling. The core with stair case in the middle of the building is equipped with ancillary rooms, such as toilets,
installation rooms. Furthermore, the timber-frame structure enables a free and flexible arrangement for individual office rooms. Beech LVL was overwhelmingly used for the load-bearing structure, the post-and-beam façades and large part of the interior fittings. Compared with conifer wood products, beech is significantly advantageous with its high tensile and compressive strengths. Therefore, it is possible to shrink the cross sections of columns and beams, while using beech to obtain the same load-bearing capacity. The main beams have a profile of 20x40 cm, which span 5.1 m over the 20x20 cm columns. 40 mm thick beech LVL boards are fixed and sealed in place immediately after installation over the exposed timber beam ceiling with main and secondary beams at 85 cm. In order to improve the noise insulation, there is a 12 cm thick layer of latex-bound split bed in the middle of the floor construction. Similar to other timber constructions, building components were also largely prefabricated with the result of high precise, short construction time and cost savings. The construction on-site started from April 2015, and till January 2016 this office building was completed. Thanks to the ecological and technical properties as well as the high aesthetic potential, hardwood is regarded as a material for the future, offering diverse options – in the form of slender components or structure elements with high load-bearing capacity. euregon head office is a first attempt to use beech products in a built architectural project, which strongly demonstrates innovations and co-operations of architects and engineers.

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O-0756

Open-Smart-Learning-Place in Yogyakarta by Integrating Internet of Things of Library 4.0

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Keywords: Low Internet of Things, library architecture, smart city

Information technology has changed human interaction as people will always be connected and informed. Recent development shows that the technology reaches the status as an extension of human life through Internet of Things. Cities, as the cradle of human civilization have collided with the growing Internet of Things transforming place into hybrid places where information goes together with human interaction and spatial formation. To respond the issue, Yogyakarta as one of the richest historical and culture city in Indonesia aims to create smart education city based on its culture. A site of cultural and heritage area of Gondomanan shows its potential for experimental design on those hybrid (new) culture on learning. The area contains rich historical facets of education and cultural values that can act as information source to the city itself. As part of Urban Design Studio in the Department of Architecture, we propose a new concept of Open-Smart-Learning-Place that integrates smart libraries based on Internet of Things. The proposal will also be given to the Yogyakarta Municipality as part of University contribution to the society. This design aims to connect knowledge of the city by integrating local context as a area-wide-sets of libraries. To express the knowledge and history of the building and the area, the library will act as an extension of the urban landscape yet preserve the heritage and existing building.

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O-0481

Upgrade Ratmakan Kampung Liveability through Resilient Vertical Kampung

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Keywords: kampung, liveability, flood, resilient

For so long kampung had been living in dense area where creativity needs to be done in order to manipulate the limited space between public and private space. The product of that creativity creates
unique kampung configuration blocks that exist to fulfil diverse purposes and necessity. They have been managing the community independently without the help of local government. Thus, the role of community might be more important rather than the government or planner itself. One of those communities is Ratmakan kampung that exist beside Code River. As time goes by, the density become harder to control, which leads to low availability of space and land. Low availability of land made people see floodplain as an option. People build buildings and houses on the floodplain which made the site vulnerable to flood. As time goes by, density rises which leads to the increase of waste disposed into the river. People started to occupy more closely into the river where the spaces first used for communal activity started to become more crammed. The Code River now exists only as a source of wet waste from the city and a source of flood disaster. The methods used for this work is by data gathering through in-depth interviews and literature studies, analyses through design precedents and cases, explore through sketches, 3D, and space syntax simulation and designing through participatory and open approach. The main idea is to sustain the character of Ratmakan kampung due to the high density and flood vulnerable in the area, and applying the concept from the local government, M3K. The end goal is to revitalize the liveable Ratmakan kampung and Code River and to program the future development for resilient vertical kampung housing towards density and flood.

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O-0377

Paradigm for Future City in Hong Kong: Revitalizing Urban Spaces

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Keywords: City, urban space, housing, community

In Hong Kong, as one of the densest cities in the world, every effort is spent on maximizing land-use to allow for more accommodations. Yet, we have sacrifices the traditional urban environment that we loved. Once a Victorian city, we have undergone rapid urban transformation since the 1960’s. Many new towns were developed in which traditional urban spaces have given way to modern “podium” development with shopping centres replacing mix-functional spaces that were orientated toward the streets. Residential and office blocks on top of the podiums became increasingly higher and as a result, the communal lives on the streets have been reduced. We need a high density city that provides traditional urban spaces, like squares, as well as the modern vision of continuous landscapes and skyscrapers as advocated by Le Corbusier’s “The City of Tomorrow”. The former provides close knitted communities with an urban pattern that is typologically classifiable, while the latter creates communities in the sky with towers overlooking landscape. The traditional city provides an urban fabric of mixed functions while the modern metropolis is a city of vertical virtuosity. We will present a project that could encompass both visions, in a single unified urban language, the vision of a traditional city with the pattern of streets and squares as the result of positions of city blocks together with the vision of office/residential skyscrapers with continuous landscape. We will also find a way to resolve the need of the traditional urban spaces that are serious lacking in our new cities, especially in Hong Kong. This could provide an opportunity for studying a proposal that could give a continuity of urban spaces linking from the past to the future, to bring back the traditional spaces that we have lost and the new urban environment that we could have.

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O-0707

**Wirobrajan Multi-Sensory City**

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Keywords: Multisensory City, Open-Ended

Wirobrajan multi-sensory city is a designed area which collaborate the principle of smellscape and soundscape to create a supportive area for stakeholders, especially blind people in Wirobrajan Area. The use of this concept aims to be navigator for the blind people so they can have activity and can be independent. Multi-sensory city according to people’s opinions as a part of active individual, is an area that give a chance for its citizen especially difable to participate in planning and developing the environment. The main idea from this concept is to create an area which can be used for every people, particularly difable with limited in every requirement and necessity. In every details of this concept, it would be included sound and smell, as an example smell of plants and something to increase their sensor of touch in the realization of multi-sensory city. Because in Wirobrajan Area there is no specific smell that can be identified as the area’s smell-mark, the reason is a centralization in activity were none to be founded so within the area we can’t find specific smell. But the traffic jam which is happened in Wirobrajan Area made the scent of vehicle emission into an identity in the area. And there is no specific sound come from surrounding activities, the current situation of existing area is commercial zone which have unorganized activities. In fact, dominant sound which can be identified within the pedestrian and citizen is vehicle like motorcycle, car, bus passing through the main street. With the certain strategic in zoning on the sidewalk as smellscape and strengthening the activities especially culinary, arranging building mass and façade with consideration in using plant that absorptive the sound this multi-sensory city hoped that difable have an accessible and optimal infrastructure as a part of city within the neighborhood.

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O-0134

**Open-Ended City**

IZAROV, Oleksandr¹

¹KVV Project

Keywords: Living environment, Urban Communication platform, Urban, Principles of sustainable development, Livina` codes and frameworks

Livin´ Planning on the basis of Livin´ Frames and Livin´ Codes are new principles of Urban Planning in the light of the sustainable development of society for the next generations. Urban Planning, based on the priority of the transport system development, which provided accessibility of the city's basic functions, is outdated. The public barrier-free spaces in the form of pedestrian frames of the city, which ensure the priority of the person in the urban environment should act the dominant role in new Livin´ Planning. They are formed on the basis of Livin´ Codes - the vital needs of city residents. While designing a city "Nova Bucha", Ukraine, we had to determine the strategy for the new city development of the next generation. We are realizing the idea of building an open city based on the principle of Livin´ Frames, which provide the opportunity to meet all basic needs of a city residents in pedestrian accessibility, in particular, the green recreational frame - Buchanska Riviera, the children's frame - Planet of Children, the educational frame and others. Livin' Frames are formed on the basis of livin` Codes - it is a public online tool for creating inquiries of the city residents, starting with the principles of city management, navigation and ending with the stylistic features of both public and private environment. In this way, Frames design is a dynamic structure, changing depend on the priority of the needs of society and the external factors with the help of the living and communication platform. This approach is advisable to use not only when designing new cities, but when reconstructing existing ones. Qualitatively new environment of a sustainable Livin` city consists of barrier-free Frames, each of which has a unique and dynamic function, formed from existing and new objects.

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O-0063

Mars Analog and the Technology Applied to Production of Simple and Self-build Structures

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Keywords: Digital Fabrication, Mars Analog base, emerging technologies

Water is the basis for life. More than five million cubic kilometers of water ice on Mars have been identified, enough to cover the planet to a depth of thirty-five meters. The development of this research station análog to Mars draws itself on this vast supply of ice water to propose an autonomous habitat on Mars.

The research station in the desert of South America is a training, research and teaching center in various subjects related to space exploration and survival of human crews on Mars or desert areas unexplored. This construction is intended to simulate a future season to live and work in Mars. Here we develop the greenhouse which is the only source of oxygen and organic food for human consumption. This project seeks to obtain the necessary elements and feasibility studies for the construction of a station Analogous to Mars prototype for the desert in South America that can be developed and built in various deserts around the world respecting local materials and taking into account the scope of digital manufacturing in the area.

This project aims to redefine the role of architecture as the essential element, conceptualize, analyze, organize and generate new ideas and sustainable future and in relation to the environment. Using the advanced technology to create solutions for safe and sustainable housing for Earth and beyond. Through 3D printing and additive construction, enhancing the unique capabilities of these technologies to use resources locally sourced building material, and therefore reduce the need to transport materials to the construction site. The unique capabilities of 3D printing technology allows incredible innovation in design.

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Tuesday, 5th September, 2017

DW2-11: CULTURE _ building design & others

14:00-18:00 / 301A (3F)

O-0373

Transformation of the Former Police Married Quarters into a Creative Industries Landmark

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Keywords: transformational, catalyst, modernisation, intervention

This design works show case how to revitalize a site that itself had been a transformational place since the earliest days of Hong Kong into a creative industries landmark. From Shing Wong Temple to Central School and then the Former Police Married Quarters, the site experienced a three-dimensional conversion which to an extent a reflection of the process of growth of both Hong Kong and modern China. The Shing Wong Temple revealed the formation of urban Chinese community in colonial time. The Central School marked the milestone of secular bilingual education in Hong Kong. It produced a new class Chinese elites who served Hong Kong and China with their bilingual abilities and cross-cultural experiences. The Police Married Quarters illustrated the improved status of Chinese and the change of social structure in the society after the Second World War. From the Shing Wong Temple to the Central School and then the Police Married Quarters, the historical layers of influence on Hong
Kong society are what make it so significant as a place. And it is with this in mind that its fourth phase of social transformation as "PMQ" was initiated. The Musketeers Foundation has a vision to transform the site into a creative industries zone. A number of key interventions added to enhance the understanding and usability of the site. It included an Underground Interpretation Area for appreciation of archaeological remains, an architectural addition between the two blocks and connected the site by opening multiple access points to the street. The site is now used by the community and an incubator for the local creative designers while making reference to and revealing the layers of historical significance represented by the site.

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O-0904
Redemption of Bukchon Topography; the Rehabilitation of a High School Into the Seoul Craft Museum
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Keywords: Bukchon, Modern School Building, Rehabilitation, Seoul Craft Museum, Museum Triangle

Bukchon area of Seoul is located on the north-east of Gyeongbokgung Palace. Since the modernization and the colonization in 20th century, this residential area of royal family and nobleman came to have two new types of buildings; the Hanok, and the modern schools. Urban Hanok is a modernized small urban house, which has a courtyard and a traditional roof with black roofing tiles. Currently, Bukchon has a district design guideline, regulating the renewal of Hanok into modern buildings. And thus, this regulation helps to maintain the scenery of Bukchon, as a unique presentation of Korean old town's architectural image. Whereas Bukchon has modern schools that was built in colonial period(from 1919 to 1945). School buildings are large, compared to houses, and has been hostile to the context of Bukchon. However, after schools move to new towns, empty schools have been transformed into a public building, like a library, or a museum. This paper will address themes of historical continuity in the rehabilitation of a modern school into Seoul Craft Museum. The site was a part of the palace, before the building of a modern school in 1945. However, the annual commemoration of royal marriage ceremony was re-enacted at school yard. Also, traditional stone wall was restored in 2006, to keep the historical continuity of Bukchon. Our winning scheme is the urban connection; between the west and the east of the site, the center placing of old ginkgo tree in the site, and the attachment of new building to old school buildings. With this scheme, Bukchon area will restore the public pedestrian culture that has been lost during capitalization and segregation of lots. Together with National Museum of Contemporary Art and the future development of Songhyun area, Seoul Craft Museum will complete the 'Museum Triangle' in Bukchon area.

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O-0617
Madina Museum: Essence of Cities
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Keywords: Muqarnas wall, Madina Museum, Madina Welcome Center

The Madina Museum project, first of its kind in Saudi Arabia, responds to a government call for a cultural visitor center and museum, located at Al Madinah Al Monawarah City, the second holiest city for Islam. Inaugurated by the king, the project is highly valued for its reflection of the city's rich history. While the holy city allows entrance only to those of Muslim faith, the project is situated strategically within an oasis
at the edges, where prophet Muhammad (PBUH) lived and lies, in a location that allows people from all nationalities and religions to visit. The design concept was generated through a deep understanding and poetic interpretation of the origins and context of the holy city. Drawing its inspiration from multiple layers of religious and cultural references, the design approach cultivated a rich combination of culture, religion, identity, and context. Islamic architectural concepts such as unity within diversity, the duality of existence, the heavenly gardens, and Islamic geometry were applied through the use of historic Islamic architectural elements. This include the use of Muqarnas, an intricate structural glass facade that allows light to penetrate throughout while providing protection against wind, pressure, and heat. The project is designed to host an information center, main exhibition hall, temporary exhibition halls, multipurpose hall, business center, shops, administrative offices, prayer hall, main core and service core, as well as areas for future expansion, all hosted within 30,479 square meters. The project also features a contemporary wall, a massive 140 meter long brick wall inspired by the ancient city walls, decorated and patterned with Islamic geometry and motifs reflecting the traditional carpets. This design was submitted to Al Madina Al Munawarah Development Authority in Saudi Arabia, for the Welcome Center Design Competition in 2016 and earned the 1st place award.

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O-0512

**Bond Square: Inserting Contemporary Architecture between the Restoration of Warehouses,**

**Durban, South Africa.**

**EMMETT, Patricia**

1Emmett : Emmett Architects cc, South Africa

**Keywords:** Urban regeneration, waterfront architecture, recycling / conservation, mixed use.

Bond Square is a mixed use development located at the Point, the harbour entrance to Durban on the east coast of Africa. It is located on the corner of Albert Terrace and Browns Road which connects the bustling Durban harbour with the beach. This scheme gets back to the essence of the Point some 140 years ago when the precinct was a collection of Bond Stores, nestling amongst the early sailing ships. One of the earliest Bond Stores at 12 Browns Road has been renovated back to its original form. Unfortunately, the larger Bond Store in Albert Terrace was too dilapidated for this, but the memory of the shed has been kept and the front façade reconstructed. The form of the early building is retained as a contemporary light building housed in the ruins of the solid masonry walls. Bond Square houses retail at Ground Floor level and offices above this in the larger shed. The juxtaposition of the sheds and contemporary architecture has been carried through to the flanking building housing three floors of parking, two floors of offices and ten very special loft units with large decks looking back towards the harbour. An unique aspect will be the landscaped square on the corner of Browns Road and Albert Terrace. This provides parking to the shops at ground floor level but by night can be used as a food and craft market.

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O-0367

**Typological Housing Challenges as Alternative Way to the**

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**Keywords:** Housing; Vernacular; Sustainability; Affordability; Architecture

How can vernacular architecture and local lifestyles be translated into contemporary architecture? Is a mimetic approach the solution? Is our duty, as architects, to preserve the identity of different cultures over time? Analyzing the following case studies, designed in different countries, it will be possible to
understand as vernacular housing typologies and features, coming from specific environments, can be translated into contemporary solutions. Developing projects in countries as Korea and Italy requires different design approaches, deeply understanding the culture, traditions, values and lifestyles as first step of a process targeted to achieve a cultural sustainability of residential developments no matter about the scale or the construction budget. The case studies are all international award winning projects:

• A2 Social Housing project (Italy), the ancient Venetian “Calle” (pedestrian path) has been translated into a new inclusive development where users’ participation is part of the designing process. • CD House (Italy), a traditional venetian countryside typology turned into a modern family house. • Butterfly House and Wave House (Korea), two dwellings able of re-interpreting the usual relationships of the Korean traditional way of living. All case studies are exemplary projects of how architecture can be environmental friendly, culturally sustainable as well as being affordable.

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O-0662

Metamorphosis from an Industrial Location to a Residential Idyll by the Lake

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Keywords: Housing, Metarmophose vom Industriegebiet zum Wohngebiet am See, Abgasschornstein wird zur Fackel des Neuanfangs, Strukturwandel

The Hoerde district of Dortmund has seen innumerable changes in the last decades as it has evolved from being a center of the steel and mining industry, to a residential idyll with lakefront housing. What once used to be low-lying mines, has now been transformed into the Phoenix Lake, and with it, the Hoerde Torch, the Chimney that once stood proud as a testament of the Industrial Legacy of Hoerde, pulled down and dismantled. Our design aims to reinterpret and rebuild this beacon as a tribute to Hoerde’s industrial past, as part of the proposal for the ‘Suedtor’, or South Gate. This contemporary administrative building is characterized by its clean, powerful look, as well as its urban identity, with the torch in the forecourt.

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O-0537

Descending to Phaedrus’ Font and Museum, the Ilissus River as Textual and Cultural Landscape

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Keywords: Housing, Archaeology, Urban Landscape, River, Museum, Philosophy

The Ilissian Field refers to the area through which the Ilissus River once flowed, south-east of the Acropolis in the centre of Athens. This constituted the setting chosen for the Platonic dialogue Phaedrus, in which Plato stages a significant choreography wherein the mythical narratives and the topological relationships of the Ilissian Field imbue every level of the dialogue. According to Thucydides, it also constituted the womb of Athens as the original nucleus of the city. Archaeological remains from all the various eras, mythological accounts, texts and ritual performances intertwine in remarkable density, weaving a complex stratigraphical landscape. Today the Ilissus as well as the greater part of the archaeological site are either covered or else lack public access. In our proposal the Ilissus River is revealed while the wider area is excavated and transformed into an open Textual Garden. Our proposal centres on the Ilissus, which is transformed into a Museum and Bathing Pools. The dipole of bridging and fracturing which permeates the Platonic dialogue is enlarged upon in the planning. On a primary level the Ilissus fractures the city space, creating horizontal discontinuity, while six identical museum constructions placed at equidistant intervals, the Pharmakeias, function as bridges connecting the two
banks. On a secondary level the Ilissus is transformed into a road, which the visitor is invited to walk along, while the Pharmakeias function as fractures. At both ends of the Ilissus the contact with the water is reestablished. At the western end an entrance is formed by “breaking” the urban ground, while at the eastern end, underneath the street which covers the Ilissus, the Bathing Pools are “excavated”. Both spaces with their grotto-like atmosphere and liquid element introduce a multisensory condition between the inhabitants, the city and the past.

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O-0759
Patehan Cultural Kampong Preservation through Cultural Injection to Informal Economy Sector

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Keywords: Housing; informal sector, cultural injection, Patehan, Cultural Kampong Preservation

Patehan was the cultural kampong in the middle of tourism area of Jeron Beteng which is the term for the area of the fortress surrounding the Kraton Yogyakarta that was the residence of Sultan and his family which is now becomes a residential area that most of its citizens still has a blood descendant of Sultan Palace. Patehan comes from the word "tea" (teh in Bahasa) in what was, Patehan devoted to prepare and eat drink at the Palace. Although he is in the middle of some cultural attractions, it seems isolated behind a thick heritage wall of fortress surrounding it without any special treatment so that marginalized. This makes the declining economic circumstances of the community of Kampung Patehan which then affects those things into things, and kampong progressively became slum and eliminate the soul and character of indigenous culture in it. If he is left, then he will damage the image of the surrounding tourist area. Now, the people of Kampung Patehan made the informal sector as their livelihood. But, these sectors are not yet empowered with good, resulting in less positive effect conferring to the economic society that was cause of slum. The idea of culture injection on the informal sector is the informal sector empowerment strategy by making it integrated by space, access, and design to the the surrounding tourism area. So that it can be enjoyed by tourists and the community at the same time can give a positive effect for the informal sector. With the application of the injection in the informal sector culture, it can evolve and be able to support the economic activities of the community, then the community indirectly encouraged to treat cultural area, so that indigenous cultures can preserved and Patehan sustain-ably through the sector.

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Tuesday, 5th September, 2017

DW2-12: CULTURE - unbuilt projects & urban design
14:00-18:00 / 301B (3F)

O-0724

Soul of Yeongdo

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Keywords: History of local, redevelopment, view, Slope & road, condo minium

'Urban Regeneration of Huinnyeoul Village Link Area and Natural Heritage'. The Huinnyeoul village,
first formed as the refuge area of the Korean War and having the quality of infrastructure degraded over time, was gradually changed into a slum which was apt to obsolescence and reduced population. Since the village, often called ‘Santorini of Korea’, has been famous for having a magnificent view, regenerating the inactivated space by developing the slope area and creating new accommodation and rental spaces is likely to attract people. How will a new village be born...? When the deteriorated area and the regenerated area have ‘Link’, people also get ‘link.’ We propose three ways of connections in which people and area are linked through a new path formed on a hillside. 1. Having linked between the new area and the old area. 2. Having linked between the path and the dwelling. 3. As the axis depends on the direction of the light, the facade rotate depends on the axis with various beautiful views, and performed in three ways: people and people; people and nature; and people and area. More specifically, Made of up different memories of the Huinnyeoul village, ‘The Village’ is located in the hillside with ramps, byways, terraces, and stairways, letting you appreciate the view. Not only people see great natural landscapes, but they also can become harmonized with nature.

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O-0304

Lace and Kikoyi: an Art/ Architectural Installation Toward Preservation of the Architecture of Uganda National Cultural Centre

NAMUKISA, Josephine

Kampala Capital City Authority, Uganda

Keywords: History of local, redevelopment, view, Slope &road, condo minium

The future of Kampala is under threat! The city's built environment is growing fast and with it the insensitive redevelopment of historical buildings due to a prevalent ignorance of the value of architectural heritage. The Uganda National Cultural Centre (National Theatre), completed in 1959 and an icon of modern architecture in Uganda, is currently under threat of insensitive redevelopment into a commercial high-rise that threatens to destroy its powerful architectural image. The purpose of this project is to utilize experiential architecture to draw attention to an endangered building by reinterpreting it into a contemporary experiential space to enable visitors reconnect with the soul of Kampala. Listening to the Uganda National Theatre, I realized that its most prominent feature is the front façade comprising a fabric-like screen. Unfortunately, the proposed redevelopment tampers with it, minimizing its elegance. As has become the norm with historical redevelopment in Uganda, what is lacking is a painstaking effort to study the architecture of the old as a basis for reinterpretation. In ‘Lace and Kikoyi’ I interpreted the building’s façade screen as a sheer lace fabric and placed it side by side with kikoyi, a fabric that is traditionally recognizable in East Africa and worn by many tribes in Uganda. The two fabrics are different, representative of two diverse cultures, their contrast highlighting each. Likewise, the installation will contrast with the façade screen, accentuating it. Strings in the color of kikoyi will be stretched to the ground, forming experiential spaces, revitalizing existing paths and creating new ones. Like a performance at the theatre, the colorful installation will draw people’s attention to culture through the traditional fabric and while doing so, connect them to the building in a new way. ‘Lace and Kikoyi’ will hopefully demonstrate sensitive, innovative reinterpretation of historical architecture that is rooted in culture.

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O-0328

The Planning and Design of Ancient Villages and Towns in North Jiangsu Province under the Background of Historical Villages —— a Case Study of Ancient Town Planning of Tushan in Pizhou City

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Keywords: Architectural heritage protection, Historical Town Development, Urban design of historic towns

Tushan Town from Pizhou City, a glorious town in the history, is closely related to the Grand Canal, which has cloth store, pharmacies, and big houses everywhere, including its location in the geographical center of the Xuzhou City, having convenient traffic condition. Moreover, Tushan town has abundant historical and cultural resources, which are Located in the tributary of the Grand Canal Fangting River at the south bank. Also, the landscape resources nearby is very rich. For the historical and cultural aspect, Tushan Town occupies the unique location of the historical and cultural ancient village and town in Xuzhou City. For instance, it gathers the Chu Han culture, the red culture, the canal culture, the Ming and Qing Dynasties town culture, Guan Yu loyalty culture of cultural convergence place of Xuzhou City, which owns a rich historical connotation and value. In the Central Urbanization Work Conference held in December 2013, the attendees proposed the viewpoints of "remember nostalgia", "taken inherit culture, the development of historical memory, regional characteristics, national characteristics of the beautiful town" and took them into practice. The product and update of Chinese ancient town should develop directly with progressive method, which insists on the authenticity principle and encouraging resident participating and self-organizing. In this paper, we take the planning and design of Tushan Town in Pizhou as an example to explore the protection and development of ancient Chinese village planning content and future prospects, aiming at providing new ideas and approaches for the future protection of ancient villages and towns.

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O-0843

The City on the Machines

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Keywords: Place Making, Genius Loci, Displacement Pattern of Tradition and Modernity, Urban Revitalization, Virtual Reality

Instead of architecture, interior is arguably the placemaking of Bay Hien neighbourhood. Entrepreneurship in fabric, textile and clothing products in the households have given the inhabitants a sense of identification and belonging to their homes; in some extent, as the term “genius loci” from theorist Christian Norberg-Schulz. Indeed, dwelling has taken place in the leftover spaces juxtaposed with the existential footholds of the textile machines as in the architecture or structure to support lives. This architectural signifier of the machines has embodied the displacement pattern of dwelling - entrepreneurial acts that does come into being as pattern of development and culture for years. This inertia works above and beyond the scale of the single houses and is capable of making urban spaces at the neighbourhood scale as in “The City on the Machines”. The project shapes a new urban topography by the uneven elevations of the existing “self-build” houses and includes the textile machines as the (spatial and economic) landscape basis on which the public realm is stacked on. The Urban design approach from materials, details, buildings and plots would make the local mode of construction - “housing by people” – work in greater scales of public space, street block and urban structures; meanwhile, to ensure the ownership state of the plots and the adaptability to household change. Translucent texture of textile and fabric rather than the built materials would articulate the “self-owned” segments of the marketplace and steer towards a sense of continuity and enclosure which is illustrated in the figure – ground Nolli Map on the second floor. Contemporary uses with variety of
techniques could be installed in this new architecture such as with virtual reality and bring it towards a high quality public space comparable to those in the formal city.

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Wednesday, 6th September, 2017

DW3-11: NATURE _ building design
14:00-15:45 / 301A (3F)

O-0309

Ecological and Participatory Design of Urban Farm

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Keywords: City openspace, urbanfarm, Landscape, Modular farm

Along with a constant growth of urbanization and a worsening agriculture and urban ecological environment, urban farm has become a significant tactics in solving the development issue of cities. And it’s especially important to build urban farm and develop a symbiotic environment for agriculture and urban space by sufficiently utilizing city open space. The subject carries out the study how to plant urban farm into city open space, which realizes agricultural production, improves the value of urban space. Implying the sustainable urban design theory especially urban ecology and user participation, this paper discusses the methods of the landscape design on the urban farm in a city open space. The paper intends to make city open space, urban farm and landscape design mutually fuse and replenish and further elaborates the various gradation. Based on case study, the paper investigate the whole process of transverse and lengthways of the infiltration of urban farm into city open space, through the conceptual design for urban farm and the space conversion of figure-ground relation. The paper also proposes the method of modular farm implantation, probes the process of the design on urban farm from the types of culture and ecology to the types of landscape and modular.

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O-0171

Embedding Rural Ecosystem Into City – Green Transformation of Villages Around Beijing

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Keywords: Green transformation , Villages around Beijing , Green r econstruction , Zero coal consumption

As the capital of China, Beijing has suffered from a series of ecological diseases in both urban and rural areas during the quick urbanization, such as urban sprawl, traffic jam, air pollution and huge urban-rural gap. The prescription for these diseases is embedding rural ecosystem into city, that is bringing new soul of city to villages by virtue of green transformation of countryside. Banbidian Village in Beijing is a village with 230 households, which takes flower planting as the main business and has three land forms, respectively village area, woodland and flower nursery. Green transformation includes tertiary industrial import transformation, green countryside transformation and rural green building reconstruction. Tertiary industrial import transformation of this village means creation of non-agricultural local job opportunities using such resources as flower, introduction of the theme of Teddy bear, and development of this village to a low carbon themed small town integrating tourism, cultural creativity and flower industry. Green
countryside transformation of this village means urbanization of the village by building ecological circulation model and appropriate technical framework of green countryside and by virtue of green countryside strategies in four aspects, that is cyclic resources, ecological dwelling houses, characteristic industries and healthy life. Green reconstruction of dwelling houses in rural areas takes the core strategies of zero coal consumption, garbage recycling, scenery of rural features and new functions to develop reconstruction technologies of green dwelling house. In the demonstration cases of reconstruction of dwelling house, zero coal consumption oriented energy saving technology integrating both active and passive measures is studied. Rustic materials and new type light materials are utilized to form architectural styles and features consistent with the local geographical and climatic conditions. Indoor environment quality is improved through green reconstruction to improve the comfortableness of rural residential buildings to an urban level.

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O-0288
Marina One, Singapore – a Role Model and Proposal For How to Live and Work in Megacities

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Keywords: Role model, megacities, sustainable, green

By 2050, the world’s population is likely to exceed 9.3 billion people and over 70% of the world’s population will live in cities. Cities cover only 3% of the planet's surface but produce 80% of CO2 emissions. Considering those challenges, the design of Marina One proposes a nature-inspired, sustainable role model for tropical megacities – where 3,000 people will live and tens of thousands will work. “Marina One”, a high-density, mixed-use building complex in the heart of Singapore’s new Marina Bay financial district, complements the Urban Redevelopment Authority’s (URA) vision of making Singapore a “City in a Garden”. Marina One is green in both a literal and performative sense. Flanked by two large urban parks, it comprises two office towers, two residential towers and a retail podium set around lush greenery. While the outer face of the four towers strictly follows the city grid, the maximised inner space is a free-formed three-dimensional biodiversity garden. Openings between the high-rises, sky gardens in-between the podium, the elevated towers, as well as the shape itself, improve airflows and create a comfortable microclimate within the multiple levels of the central garden. Marina One offers a biodiversity garden at its core – the Green Heart, approximately 6,000 sqm of greenery and a 13.2 m high ribbon waterfall feature. Vast communal spaces facilitate opportunities for indoor-outdoor living. The inspiration for Marina One derives from the primal arrangement of rice terraces in Asia. The idea of cascading greenery on a multi-layered slope is part of Marina One’s bespoke architecture. The environmentally smart design follows the path to zero energy – it features energy-saving ventilation systems, a highly effective external sun-shading system and high performance glazing to reduce direct solar radiation into the building.

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O-0694
Walnut Square in İstanbul

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Keywords: Ecosettelement, permaculture square, ekotechture

Urban squares introduced dozens of innovative practices to their highest creative potential. offers open enrollment and trades, and other promising students regardless of academic background. visionary exploration, require any design ideology or convention, New urban space alternatives in design ways & models for retaining the best features of exceptional urban lenvironmets. City centers makes &
learned the importance of being organised and in working communes, in order to aim, target achieve we should ground on our mutual respect, love, common will to work but not on our diversities, suspicions, flaws or worries Walnut square is harbour the flora of the Islands in their front and backyards, rooms, basements, balconies or their roofs; and they can grow their own vegetables and fruits with the compost of kitchen wastes and horse, donkey, worm, seagull or human manure; with the water they collect from their gutters, thanks to the light of the “sustainability” All spaces of Walnut square, are walking, breathing, every possible open spaces; and on the water, on the streets, in squares, in vineyards, in gardens, The main problems of our environment, country and the globe are urbanisation, environment and energy. Walnut squarei keeping in mind that we will not be able to maintain personally, we aim to grow stronger and build a infrastructure. Walnut Urban Square which will ensure that masters will transfer their knowledge, accumulation and manners, will establish a steady link between master-foreman-apprentice and form their own traditions by strengthen the main element of production.

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O-0692

Self Sufficient Green Building of Cyberwalk

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Keywords: Green building, IT Park, environment-friendly, efficient, high performance

Man belongs to nature and that is how he has been designed to function'. Originating from this notion, Cyberwalk – a self-sufficient green IT park was conceived to bring man and nature together, within an office environment that would enable better ideation, creative thinking that would lead to innovation in a relaxed working environment. The result is a spectacular expression of class, contemporary style and classic architecture – Cyberwalk – the first LEED Gold certified building in Manesar, Haryana, India. With an aim to head to the greener pastures in contrast to the monotonous cubicle farms that are no place to draw inspiration from, it has green office environs with a character endowed through trees. Located within a 150-acre information technology (IT) campus in close proximity to Delhi. The campus has been designed to utilize the natural resources of sunlight, air, water and power in the most efficient manner. Cyberwalk has a dedicated area of 25000 sq.ft to 38000 sq.ft for commercial office space. Since the building aimed at a LEED rating high performance glass ‘Envision’ was chosen to meet the parameters of green building which has thermal insulation properties and high spectral selectivity. This ensures abundant light transmission in comparison with other solar control glasses. With the extensive use of high performance glass Cyberwalk has become an exceptional model for green architecture. The project demonstrates a deep commitment towards creating an environment-friendly, efficient facility that operates at lower costs, designed to be in line with the requirements of the contemporary Indian corporate office. The Cyberwalk ensures a good quality of life for any employer with health and fitness center, swimming pools, day care centers, ATM’s, food courts and cafeterias.

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The Productive City as an Edible Vertical Landscape

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Keywords: Agriculture, Productive City, Sustainability, Urban Ecology, Mixed-use

The global food industry is required to provide food security for the world's growing population. Population growth overtaxes the cities and progressively distances the population from food production sources, which results in a heavy burden on the environment. From an ideal ecological viewpoint, the city should function as an ecosystem, a unit that is capable of supporting itself. Urban agriculture can help transform the city into an ecosystem. Growing vegetables in-situ cuts down resources needed for industrial agriculture and reduces the city’s ecological footprint. Urban agriculture, as a regenerating approach for sustainable urbanism, enables urban densification and mixed-use realization, while contributing to food security. The transformed augmented landscape generates a unique city identity and strengthens the local economy. The city dwellers’ benefits are manifested in reducing food costs, consuming fresh food and avoiding harmful pesticides. The presentation suggests an integration of urban agriculture as a land use and a building typology, and examines the advantages of agriculture implementation in the urban landscape through different levels of intervention: the urban, the building and the building's envelope. At the urban level, a multi-layered mixed-use Tetris-like development suggests a linear public promenade over main urban route (Tel Aviv, Israel). At the building level, a residential multi-storey building embraces vertical layered greenhouses where dwellers can grow their food (Wuhan, China). At the building’s envelope, a vertical field for food production substitutes the conventional agricultural land (Milan, Italy). The selected case studies demonstrate the potential of productive landscape in becoming a key player in urban renewal, both in the public and the private realms. Urban Farming as a solution, brings us closer to natural food sources, enhances our understanding of the complexity of our world and raises awareness about the need to live in symbiosis and harmony with nature.

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Denai Alam : the Concept of 'Denai' and 'Kampung' Architecture Style as a Safe Walkable Housing

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Keywords: Environment, Natural, Symbiotic, Kampung

Open space is a spatial framework that interacts with nature and landscape structures in urban areas. Define broadly, open spaces include greenways, parks, rivers, gardens, plazas, and waterfronts, where the area is not covered by any structures and the dominant area is exposed. The studies of open space indicate its function; small areas of green open space, such as parks and playground, relieve congestion, while the larger scale is such as parkways, rivers, stream valleys that connect green networks. The modern ecological framework concerning open spaces in urban areas has recently been focused on these spaces’ interaction with the public. A number of previous studies have looked at the positive impact on public health. Green parks in the housing development enhance the quality of life and create positive emotions by contributing in reducing illness caused by stressful living. Furthermore, having
open green space in neighborhoods will increase their walkability and positive interactions among residents and park users. This research is to study the utilization of open space at the neighborhood level is more associated with the physical and functional properties of open space. It is the desire of the Developer to create a Master Planned Community for its land bank in the Klang Valley stretching some 11,650 acres from Shah Alam to Kuang known as the Guthrie Corridor Planned Communities. The Vision of the Guthrie Corridor Planned Communities is to plan and develop a planned community of international standard that provides all the comfort and convenience whilst enhancing the harmonious existence of human and nature. The fundamental to this concept is to design a hierarchy of pedestrian channel, 10 meters to 30 meters of undisrupted green lanes, which function like a road system for non-motorized movement. These green lanes, known as ‘Denai’ in this application, are totally segregated from the road layout.

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O-0391

The Insertion of Nature in Architecture: Two Concepts of Greenery Integrated with the Volumetric Party

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Keywords: Sustainable, Winery, Merging Design, Gravity Flow

We have conceived inside our studio two building projects in a short period of time, spontaneously integrated with nature in two diverse ways by the use of green spaces. The background of our scene is the city of São Paulo in Brazil. One of the largest conurbations of the globe that suffers from a range of urban diseases that goes from social disparity, to urban violence and mobility issues. One of the biggest needs of this scenario and easily seen by any citizen that inhabit this hostile urban environment is mainly the lack of green areas and parks, a paradox to a city in a country where nature is rich and exuberant. It is presented here two small office buildings where concepts of architectural speech with nature characterize themselves in opposite ways to each other: interior and exterior greenery inherent to the construction.

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O-0706

Life Garden

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Keywords: Nature, Placeness, Environment, Correspondence, Harmony

The Life Garden will be placed in the most beautiful southern island, Jeju. In recent years, many due to the development project, this beautiful Jeju Island is being destroyed. In any way development continues, and consciousness of the architects of environment is needed than ever. Some think of buildings merely as a series of exteriors and flat surfaces with fancy form. But architecture is more complex and must have a fundamental understanding of why the space must exist and explore ways to tailor it to its surrounding environment, and create a space that not only meets the ideals of clients but the purpose of the users. These requirements are met when only exist as a building worth. Ultimately my purpose is that The Life Garden needed to be in harmony with its natural surroundings and cater to the users’ needs. To be architecture in harmony and adapt to the surrounding terrain. Also, since it would stand in the midst of natural beauty, the building needed to be eco-friendly. I made a particular effort to refine the identity of Life Garden, clarifying its philosophy and vision rather than focusing on a fancy shape and surface. Objet-type architecture have been created by many famous architects but
spaces that touch us spiritually are much rare. To be able to become a moving building, there must be countless worries and authentic discussions in the process.

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O-0341

Helical Flux Winery – Sustainable Implantation & Environmental Integration

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Keywords: Nature, Placeness, Environment, Correspondence, Harmony

This is a proposal for a sustainable winery in Napa Valley, California, U.S.A. The wine producers have been trying in recent years to introduce their brands to a wider public, of course by advertising the quality and fine characteristics of their products but also by talking about the unique architecture where the wine is made. The building or the facility itself can become like an icon that tourists recognize and even be printed on the label as the emblem of the winery. A positive architectural image can certainly help spread the good name of its wine products. The challenge, however, is that wineries are typically situated in the rich natural environment, and we must carefully integrate the nature and the architecture, so that both elements become a whole harmoniously. In other words, it is important to design a unique and attractive architecture without destroying the landscape. Therefore, a winery must be well designed to function as a factory that is able to make good quality wine, and all the while, it should be an attractive place where tourists can and desire to visit. The Helical Flux Winery has implemented the Gravity Flow System, which is a unique sustainable methodology specific to designing wineries. The Gravity Flow System uses gravity for “free” flow or movement of grapes, must, or wine through descending levels of production line within the winery. The gravity flow takes advantage of physics without the use of pumps, and it can improve the efficiency of the operation process as well.

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O-0730

Utilization Guideline of Bundaran Waru For Supporting Sustainable Urban Life of the City of Surabaya

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Keywords: lostspace, greenopenspace, flyover, arterialroad

Policies and approach strategies about sustainable development are becoming crucial. Therefore every development should be based on promoting not only the economical interest, but also ecological aspect and strong consideration of aesthetic. This includes how to integrate infrastructure development with the city spatial planning and design. The unintegrated its concept leads negative effects to urban landscape development and planning, for example the presence of lost spaces beneath the flyover. Bundaran Waru, the main gateway of Surabaya city has lost space due to the infrastructure development. Consequently this space becomes negative image for Surabaya city, even though according to the Spatial Plan 2010 of East Java Province, it earmarkes as open green space of Surabaya. This study aims to find the idea for utilizing the Bundaran Waru to make a positive contribution to the city especially suitable city spatial plan. This research begins with reviewing the literature to find the suitable typology for utilizing an open space based urban phenomena. The second phase conducts direct observation to obtain the physical data of the objects for its potentials and problems. Furthermore, the obtained data were analyzed by descriptive qualitative method in order to formulate design criteria of the defined objects based on existing environment charactericts. The result
indicates that the object has strong potential as an passive green open space in which the image of the Surabaya city can be accommodated. Keywords: lost space, green open space, ecology, arterial road, image.

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Wednesday, 6th September, 2017

O-0819

Soul of the City; Cooperative Housing Development as Urban Vitalisation Strategy For Industrial Wastelands

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Keywords: Co-operation, Social Catalyst, Community, Sharing, Future Proof

Superlofts is a new housing concept developed by MKA that breaks the conformity of traditional urban development. Contemporary urban housing developments do not allow the inhabitants to participate in the creation of their environment. The Superlofts model puts homeowners at the center of the decision-making process, giving them the opportunity to customize their homes precisely to their wishes and budget. The outcomes are larger living spaces, cost-savings through collective commissioning, more use of high-quality materials and craftsmanship, more energy-efficient buildings and integral social sustainability. Meanwhile, social connections are enhanced among the residents by the sense of communal urban living. Each project grows its soul over time through a collective of unique lifestyles, which develops and adjusts as the inhabitants shape their home.

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O-0723

Daegu Bank Second Headquarters _ Sustainable Development Model For Office Communicating with Urban, Culutral and Natural Environments

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Keywords: City, Nature, Communication, Sustainability

1.Background DGB, founded in 1967, is the first regional bank in Korea to form close ties with the Daegu community. The site was where textile factories were located in the past. It is a place where the memory has been stacked with the industrial development of Daegu city. As the years passed, the textile factory was dismantled and the site became an abandoned place for a long time. After twenty years later, this project called “Culture Platform” (Daegu Bank Second Head Quarters) has been completed on site in 2016. 2.Purpose Equipped with in-depth understanding of the Bank’s philosophy, We strived to create a space that incorporates the Bank’s vision to grow with the local community, provide comfortable working environments, and serve as a cultural complex for the public. The purposes of this project are as follows. Creating a cultural platform for communication with local community Realizing an interactive
workplace according to communication scale · Providing an office model through sustainable design & technology
3. Architectural Methodology The lower levels of the building were planned to be filled with various cultural programmes such as galleries and book cafes, and allow easy access for local residents by positioning entrances on all four sides. Rather than a unified podium, the composition of the spaces is divided into four individual human-scale masses separated by space programs like small town in the city. In the office spaces on the upper floors, a courtyard which embraces natural light was planned to enhance indoor livability.
4. Conclusion The design of headquarter offices must not only satisfy functional requirements such as the need for work space, but also reflect the company’s values, philosophy, history and vision. The project aimed to establish new Headquarters as a cultural hub of Daegu which delicately illustrates DGB’s sustainable vision for the future.

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O-0546
The Newest Thinking in Healthcare Design - Ewha Womans University Seoul Hospital
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Keywords: Healing Environment, Sustainability, Patient Experience, Patient Safety, Staff Satisfaction

Healthcare facility design is constantly evolving not only with the development of medicine but also with new design philosophies. Ever since a new methodology of Evidence-Based Design (EBD) emerged, Korea’s healthcare facilities are adopting various healing space concepts based on evidences, not by intuitive healing environments. The new Ewha Womans University Hospital (EWUH) is a recently completed design project which follows the updated medical planning concept as well as EBD philosophy. The site is located within the new urban development zone which issue a challenge to the designers with unique opportunities and constraints. Through its design process, numerous alternatives were reviewed in order to provide the optimum solution for an architecturally symbolic and sustainable design while overcoming the regulatory limitations of the site. In addition, the healing environment is emphasized focusing on the patients’ experience and safety. Furthermore, there is a growing trend of securing diverse convenient facilities for staffs, which ultimately contribute to the patients’ care and cure by improving staffs’ satisfaction.

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O-0119
Platform-L Contemporary Art Center
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1JOHO Architecture, Republic of Korea

Keywords: Healing Environment, Sustainability, Patient Experience, Patient Safety, Staff Satisfaction

Geometrical Philosophy The project is a proposal of a cultural center “Louis Quatorze Louis Quartorze” Korea’s representative brand. Louis Quatorze is a proper noun but a representative of France to the French King Louis XIV is currently in Korea and Korean brands owned. Through the construction of this cultural platform to form a mature rethink the image of “Louis Quatorze” brand through the complex cultural space project began. That PLATFORM L project was planned to form a spatially chapter in discovering new artists and share a variety of cultural events Multicultural Programs The “PLATFORM L” complex cultural center is a cultural space that combines a variety of forms. And in particular to overcome the limits indicated for the first kind of general residential areas by utilizing the underground space as much as possible combine the various programs. 20 meters of underground space has 160 seats in theater form and using the Moving Wall system was designed to enable various types of performances and exhibitions party. The ground is placed a flag store shops, galleries, restaurants,
and VIP Rounge and related offices. Each of the programs planned to be connected organically spatially extended. Batch features of this project is the construction of biomass with a courtyard form. Along with the three sides of the road as much as possible by utilizing the characteristics of the premises placed in the courtyard in the center of the earth was intended to different spatial expansion. The courtyard is empty but as Korea’s traditional concept of the yard space is utilized as a possible expansion of the various space programs. Namely outer space, various types of event space associated with the flags Store restaurants, and is a versatile space that can absorb a variety of programs in conjunction with the Open Space Museum Auditorium One of the foremost aims of the project was that it retain a sense of outdoor space throughout; this concept guided the formulation of a design which addresses Korean construction regulations in an unexpected way. Platform-L achieves this by interpreting the outdoors as a mediating space and platform serving to extend and link the various functions of the building, including programs in the galleries and events in the Live Hall as well as visitor experiences in the art shop and cafe. A void space in the form of a courtyard set in the center of the building visually resembles a Western courtyard, though from a functional standpoint it operates more like a traditional Korean courtyard - namely, as a buffer zone and resting place. This space performs a key role in the overall design of Platform-L, connecting the building’s two separate wings and providing a shared free space.

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O-0086

Material Experiments on the Boundary of Architecture, Art & Nature

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Keywords: Material, Typology, Environment, Nature

stpmj navigates on uncharted territory of material experiments focused on its sensoriality and performativity expanding our conventional material culture to broader built environment. On the border of architecture and art we seek provocative works that speculate on a broad range of researches, leveraging the potential of materials regarding to nature / environment as a greater city context. stpmj are going to present 3 different works revealing how the roles of materials in a design process are engaged to typology, art and nature / environment. Shear House seeks how a simple-formal treatment influences to program organization and environmental qualities. The house has two different ends, a typical gable roof side, and a sliced and pivoted roof face. West façade with the gable roof is continuously transformed towards East responding to sun orientation. The sheared volume of roof creates deep shade in South and a cozy terrace in North. Stratum House explores a new way of concrete casting technique simulating a natural geologic formation. Three constraints are applied, amount of pigment (collaborating with an artist), water-cement ratio and use of diverse aggregates. Different color, texture and strength of concretes are cast on-site within time differences. It allows to have delicately designed divisions of stacked concrete layers showing time lapse. Invisible Barn is a site-specific design proposal that re-contextualizes the landscape of the Sagehen Creek Field Station by projecting the landscape on the structural proposition. A barn shaped-wooden structure is sheeted with reflective film on its surfaces. This mirror-finished folly is placed in the middle of the grove. Due to the similarity of its size and placement of the trees, the projection on the mirrored surface is similar to what people would see without the surface.

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O-0608

PMDC HQ: Building Structure that Defies Solar Heat in the Middle of the Desert

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Keywords: Mashrabiya veil, aluminium veil, solar heat, spatial typology

The PMDC HQ is an office building located in Jeddah, Saudi Arabia. The design approach aimed to project a prestigious architectural identity and urban philosophy inspired by the contextual parameters. The approach applies sustainable design methods and techniques in order to reduce solar heat in a city where the sun is shining most of the year. This balance between the city’s famous architectural identity and the need for sustainability was achieved through the use of a modified and contemporary version of traditional Mashrabiya designs. Mashrabiya, an important element of Arabic and Islamic Architecture, is an enclosed lattice-work window projection aimed to provide shade, privacy, and wind ventilation. In this project, the modified Mashrabiya design was applied in the front (East) elevation, integrating the outside (sunlight, acoustics, form) and the inside (function, hierarchy, ergonomics). Each (Mashrabiya) panel responds to the sun through an orthogonal and diagonal projection, creating an illusion of movement and a play of light while providing shade and maintaining privacy. Meanwhile, the South elevation is clad with large skeleton of porcelain panels that resemble fish scales. The panels were fastened with innovative jointing technique that allows air to pass through. This technique was applied for patent to Saudi Intellectual Property Office. Moreover, a glazed reflective insulating silk-screened glass with decorated warm yellow dotted patterns is added at the East, North and South elevations. The addition of the screened glass provides optimal shadings while giving adequate amount of light at table height in the work spaces inside the building.

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Wednesday, 6th September, 2017

DW3-22: OPEN TOPIC _ varia
16:00-17:45 / 301B (3F)

O-0300

Transforming a ‘Non-Place’ through ‘Architecture as Landscape’: Designing the Premises of Faculty of Social Sciences at University of Dhaka

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Keywords: Landscape, Place, Non-Place, Existential Experience

Dhaka, for its alarming population density, limited land area and unplanned developments, faces challenge to posit an alternative approach towards designing urban space, which may eventually manifest into a resilient city. Through the design of ‘Architecture as Landscape’ an effort was made to transform a leftover open space situated within a zone of historic, cultural and political significance into a ‘place’ for the ‘people’ where the ‘Genius Loci’ itself directed the design elements. The approach that integrates nature and the urbanites to offer interactive public space will be discussed focusing on the architectural interventions. The project dealt with design ideas, considerations and strategies
interwoven with challenges due to constrained budget. The ‘site’ itself being located at the heart of University of Dhaka, witnessed the major movements in course of the history of Bangladesh. Focus has been given on enhancing the essence of the ‘place’ itself by a deliberate design strategy of evolving the ultimate landscape formation from on-site design decisions responding to its immediate surrounding structures as well as existing natural elements. Addressing Culture, Climate and Ecology, the approach emerges from the efforts of establishing positive feedback to the city fabric rather than just to fit into the existing unplanned growth. The effort was to develop experiential images to be interpreted with myriad possible cognitions. There was a need for an accumulation of specific images with scale and tactile and these made a ‘Collage’ of choices that public space needs to be a successful one. Semiological definition of memories and experiences made the optimized selection of elements possible. Ever since the project has been opened for public the once insignificant unattended space started catering as a meeting place for the students, faculties and other users of the University Campus. By transforming a ‘non-place’ into a ‘place’ for contemplation, this project offers the citizen of city of Dhaka the much needed existential experience.

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O-0652

Restructure Seturan Region in Yogyakarta as Turn Back Crime City For Education Area

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Keywords: Provincial Student Apartment, Social Segregation, CPTED

Social Integration Space Tambakbayan is a space that integrates architecture, environment, and behavior. This design aims to eliminate the phenomenon of social segregation that is the source of high crime rates in the Seturan region. To achieve this, the Provincial Student Apartment was designed with the CPTED approach (Crime Prevention Through Environmental Design) to create an effective space for social interaction. Thus, this Tambakbayan Provincial Student Apartment creates a safe area by being a means to expand the previously fragmented social network within the community. Physical aspects of the CPTED strategy are: (1). Mixed Use area (2). Generator Activity (3). Reduces Trapped Area (4). Eliminate isolated Route (5). Minimize Vulnerable Area (6). Natural surveillance.

Providing a container for the acculturation between residents of student apartment of Puncak Jaya and Poso area to mutually transmit positive attitude and also accommodate public facilities to occur also acculturation between the residents of student apartment with the people around who previously had phenomenon of social segregation among them. This is in accordance with the theory of Crime Prevention Through Environmental Design - Oshkosh, where not only the physical aspect to support the prevention of criminal acts but social conditions in the environment must also be good. As an example if the neighbors mutually ignore each other then if there is a crime in the environment between the neighbors will not help each other. Containers that are referred to in this design are (1). Multipurpose meeting hall for both occupants of student apartment container and nearby residents for neighborhood health center and social gathering (2). Courses for the public, especially sports activities, can also be utilized for the August 17 event (Indonesia Independence Day) (3). Amphitheater, for the good performances of the occupant Asma and the surrounding community.

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O-0733

Soul and Complexity in Harmonious Design

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Keywords: complexity, harmony, water design, Plato philosophy

Objectives
The aim is to develop a theory of design. Modern metropolises have lost human scale and the excitement thus imbalance between the male and female factors and mind or between predictable and unpredictable factors. Contemporary architecture and urban planning should provoke and seek to restore the balance in terms of ecology, aesthetics, culture and security.

Background
I grew up in a family with a architectural and construction tradition. My great-great grandfather graduated in St. Petersburg and he managed roads and bridges. He designed bridges, among other things, using a little-known technology of concrete. He inspired me to and always accompanied my ideas and allowed me to realize own experiments. I started with cutting and then sewing clothes, then came the furniture and custom interiors. Later studies, during which I undertook various design topics inspired by the theory of complexity, dynamics of water and the human body.

Methods
The main method is Research by Design supported by the theoretical studies and qualitative analysis. Some realisations and studies of iconic architects are compared with own concepts. The process of designing allows for development of ideas and improvement of techniques and material.

Conclusion
The current architectural styles no longer keep up with the technology and the needs of the residents. The essential is development of methods of design, that will be more friendly, provoking to interpersonal interactions and love. The creation of sourrounding, where all the needs of residents are satisfied, while maintaining space for plants and animals. Designing the world in which we would like to live, give a chance to live this world one day.

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O-0057

BLANKSPOTS: a Novel Approach to a Building Façade as Art Canvas

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Keywords: facade, street art, indeterminate, contradiction, regenerate

The Wynwood Arts District is the creative urban hub of Miami in the USA, and attracts visitors from around the globe to meander, explore, and photograph its world-class street art scene. This concentration of wall paintings transforms its everyday architecture into a 3-dimensional city canvas of dynamic transformation – one that is rapidly emerging as the new creative scene of Miami. Making use of the urban canvas phenomena distinct to the neighborhood, the design for a new façade for an 8-story parking garage and mixed-use building posits the exterior wrapper typology as infrastructure: an amorphous fixed grid that supports the addition and subtraction of temporary painted installations within its perforated boundaries. The 4,273 m² façade, scheduled to complete construction in 2018, will become a contextual magnet – a vertical arena designed to change continuously with the addition of new art. The Wynwood façade establishes a synthetic bond between two opposing yet connected strategies embracing indeterminism: between the Miesian open-ended, cool geometricized optics, and the out-swapping and messy regeneration of Archigram.

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O-0486
Compact Renaissance: Examining Sustainable Urban Design Principles For Emerging Satellite Ecocities of a Megacity Using the Case of Yangpyeong and Seoul in S. Korea
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Keywords: Ecocity, Satellite city, Sustainability, Sustainable urban design

The ecocity must re-examine its form and function when applied in any unique setting, like an emerging satellite city of a global megacity. Seoul is a metropolis of 10 million people, while Yangpyeong is a suburb of Seoul with a population of only about 0.1 million people. Although the low density city has vital natural assets, convenient links to the Seoul Metro system (about 30-40 minutes by subway from Yangpyeong to the heart of Seoul), recreational attractions, and national bike paths, Yangpyeong has been wrestling with the low development due to regulations related the water preservation, resulting in uncontrolled sprawl, lack of cultural / commercial destinations, and weak community activities. Therefore, the research focuses on the framework of 'satellite eco-city' as efficient development plans in the relationship with Seoul. This comprehensive plan, 'Compact Renaissance' is based on strategic development of pedestrian oriented network connecting existing urban features, to draw more visitors and residents from the nearby megacity, spurring sustainable economic growth with minimal impact on nature. Studio based design research, comprehensive site studies, meetings with local government teams and local design consultants have uncovered the existing attractions in specific areas in Yangsu, Kuksu and Obin, which will be the point of compact development to maximize the impact to larger area. This model offers principles useful for growth while protecting nature, and views cities in context of their broader systems. The approach supports a social and cultural framework for the city, which does not impose any particular morphological expression but rather suggests a new take on urban form that fosters open structures for citizens to shape their own experience in connecting with nature. The research findings suggest additional strategies for Yangpyeong’s current initiative; and demonstrate an objective, flexible process of testing planning approaches.

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O-0220

Architectural SonarWorks

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Keywords: Architecture, musical language, geomatic, signal processing, convert digital data into sound, cartographic analysis, GIS, psychogeography, urban morphology

Lewis Mumford, in 1938, and then Aldo Rossi have claimed that: “The city is a natural fact, in the same way as a cave, a nest or an ant hill. Yet it is also a work of art.” I would myself add: “But overwhelmingly a partition.”

The aim of this project is to represent – through a precise morphological and cartographic analysis – a method which consists in converting digital data into sounds a musical reading of the cities' architecture. The notion of language is at the core of this project. As they listen to the final work, the audience will gradually assimilate the sounds played. Then, they will be able to “describe” the musical partition. In other words, the listener will be able to locate the space that has been described and to differentiate the sound and the architectural atmosphere of one city to the other.

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O-0794

Self-healing Recovery of Community in Sidomulyo Kampung, Yogyakarta, Indonesia

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Keywords: Self-healing, Recovery, Community, Kampung, Co-design

The majority of Kricak Kampung residents depend on physical and rough works. Most of the youth are unemployed and built the habit for gambling and drunk. Lots of immigrants from outside the city come to venture in the kampung. Nowadays, Kricak Kampung develops into a populous slum area occupied by both the locals and immigrants. Most of them live in a small house made of plywood or bamboo wall without windows and toilet. A house of size 25m2 could make up for three families where most of the house located on the banks of Winongo river. However the kampung has prospective on the community diversion and activities based to the diversity of the residents' background. This strength is the core strategy for the kampung development concept where co-design method used as an approach. The method emphasizes collaboration with residents' participation through the supervision of the architect. The resident will put into responsibility as people's agents. Thus the community independently redevelops their informal space, disassembles, and rebuilt the region collectively. The residents are expected to be competent on determine their own requisite to create a sustainable region. Co-design is directed implemented into physical building using the concept of HBE (Home Based Enterprises). This is suitable to increase the residents' economy due to the nature of community and location.

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Design Works Session (Poster)

Future - Building Design

P-0714 (PDW A01-1)

A Proposal of “REGION-ORIENTED ZEH MODEL” by Utilizing Regional Resources

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Keywords: Energy conservation, Regional revitalization, Zero energy house, Local timber, ENEMANE HOUSE

This paper shows the planning process of the design work, awarded the First Prize in ENEMANE HOUSE 2015. ENEMANE HOUSE 2015 is a housing competition for universities to demonstrate the building of experimental Zero-Energy-Houses (ZEH), conducted by the Agency for Natural Resources and Energy in Japan. Five universities were selected and each built a house in Yokohama on October 2015 to compete with an environmental quality level for each housing. Yamaguchi University collaborated with its architectural labs (planning, environmental and structural system) forming a team of more than 50 students to participate in this project, as well as involving local cooperation enterprises in Yamaguchi City. Together, we proposed a “REGION-ORIENTED ZEH MODEL”. This paper shows the planning, design and construction process of this model as well as the probable challenges it might face as a local housing supply system. Concerning the “Standardized lifestyle” conceived during the rapid growth period, this design work proposes a new housing model that emphasizes on “making energy” instead of “reducing energy usage”. People who live in this model can adjust their energy consumptions according to their own lifestyles. To achieve this design concept, we designed the shape of the house to maximize the effect of natural lighting and ventilation, as well as to minimize the dependence on the likes of artificial lighting and cooling-heating device. This shape of the house is essential to achieve the ZEH model to match the local environment. Based on the “REGION-ORIENTED ZEH MODEL”, it is concluded that this design method based on the abovementioned shape of the house and local timber network system is a feasible construction method to be widely applied in local cities.

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P-0417 (PDW A01-2)

Xinzheng Vertical Farming Design

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Keywords: Vertical Farming, Hydroponic System, Passive Design, Solar Radiation

The purpose of this project was design, install, and maintain a hydroponic building containing different types of vegetable varieties. The design process and following steps are learning of how to properly grow hydroponic greens. Not only the hydroponic system will be concerned, but also the natural growing of vegetable are included. Hence, it is important for the design to meet the local weather conditions. This project is categorized into various sections that there are water system, passive solar system, cropping with local university and farm marker commercial etc. The vertical farming design is also depended on the facades facing oriented process, where it takes the complex situation some times that there enough sunlight radiation has to pass on all facing with seasons changed.

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P-0160 (PDW A02-1)

Air China Tower

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Keywords: dream of flight, tower, headquarters, offices

The Air China Tower is designed to represent the magic of air travel and a vision of human activity as “seen from the air”. Air China Group headquarter is located on the South East corner of Sanyuan Bridge in Chaoyang District. From the view at the corner of North Third Ring Road, the building reveals its simple and big massing that is changing with the movement of the view angle. Being different from the cubic and heavy buildings around, the headquarter tower represents itself by a slim vertical line. The entry point of the building expresses the business image of Air China by the form of simple and big scale. The inward space creates a pleasant environment for people. The high usage quality of the building derives partly from factoring in the environmental context through the interplay of differing ways of treating the façades according to their orientation. The programme’s orientation and shape have, of course, been engineered so as to take the sunlight requirements of surrounding residential buildings into account. All in all, this programme will integrate into the Beijing cityscape with a gentle strength, elegant and subtle, even as it remains faithful to Air China’s core values: - it is a link between the sky and the Earth, - and a link between people. Project delivered in 2015

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P-0159 (PDW A02-2)

Data Processing Centre of the Agricultural Bank of China

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Keywords: data processing center, offices, hotel, training center, auditorium

China’s third biggest bank and its data processing centre (the biggest in Asia and housing a unique mix of state-of-the-art high tech amenities coupled with an unprecedented programme that includes a hotel, an auditorium and leisure facilities) called for a refined, introverted building to offer bank personnel a large-scale oasis of calm in a fast changing part of the city. The buildings, which are surrounded by streets, are set around a calm, luxurious interior garden. The façades are punctuated by shutters that filter the light. As in traditional Chinese palaces, the plan looks deceptively regular. Its layout is subtly enriched, however, by a doubling up of the north wing, and an east wing slightly set back from the rest, not to mention the dramatic lines of the reception building to the south-east of the site. Project delivered in 2008

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Future / - Unbuilt Projects

P-0812 (PDW A03-1)

Fly Map (Flying Mobility Apartement)

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Keywords: Portable apartment, flexibility, mobility

Keywords: Portable apartment, flexibility, mobility Along with the development of time, people need high flexibility to move from one city to another with ease of access in efficient ways but the growth of land is not balanced with the growth of population. So, we often find the amount of traffic jams on the road which can interfere with our mobility. Nowadays, the new technology has been created which named E-Hang. Inspired by E-Hang, we developed a breakthrough of new apartment design by combining a drone as a portable shelter that can follow the flexible mobility of the user with the convenience of unlimited access. Supported by the VTOL system (Vertical Take-Off and Landing), our apartment will be able to take off and land in difficult areas. So, it will be able to follow the high occupancy of our mobility to move from one city to another. Besides land and traffic issues, there is another problem which is energy. The people of the future are depending on fossil fuel, then this apartment uses the propeller system which can be used as electricity generator to cover the energy crisis. The portable apartment is completed with compact layout and aerodynamic design which is well-fitted with the people in the future era, this also can be shared by 6 people. It is also completed with electrical, sanitation, and air system. The structure is designed as a plane structure. It is expected that this design may help people to move from one city to another along with their portable apartment in efficient ways.

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P-0770 (PDW A03-2)

Multi-Family Houses: Value as Alternative Housing through Availability

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Keywords: Multi-family Houses, New Typology, Community, Availability

Housing is the most essential space in our lives and the most basic component of cities. Currently in South Korea, however, homogenized high-rise apartment buildings occupy more than 50% of total living quarters, thereby failing to offer housing diversity. Unlike high-rise apartment buildings, which separate the inside and outside through boundaries, multi-family houses are connected to each other more organically to promote integrated city living and interpersonal relationships. Though once fixed, inflexible, and tightly packed that interference prevailed, multi-family houses become organically usable if reorganized according to the concept of availability, and thereby herald new alternative housing that can revitalize the soul of the city. We propose applying availability in three key spaces: rooftops, ground floors, and dwellings. 1. Rooftop Availability: Used by diverse members of communities at different times of the day, rooftop areas can foster core social interaction and host social programs with ripple effects across cities. 2. Ground Floor Availability: Commercial spaces on ground level can become available at different times of day. Newly available areas scattered across ground floors can provide new spaces—kitchens, conference and party rooms—for the public to enjoy community activities. 3. Dwelling Availability: Various one or two-room units can be used as a whole or separated spaces to accommodate diverse members who can generate synergy. Space availability can vary according to household composition and different family situations: parents with children + babysitter, elderly couples + helper, and families with students + tutor. Once several multi-family houses in neighborhoods are reorganized to promote availability, they can become seeds to bring more people in cities together. As
multi-family houses promote shared values, they can function as alternative housing in today’s isolated urban situation and catalyze the revival of the soul of city backed by a restored community.

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P-0244 (PDW A04-1)

Architecture and Assembled Environment

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Keywords: Sustainability, Urban High-Density Residence, Landscape, Green Network, Self-Sufficient City

Aside from the utilization and improvement new technologies, the issue of sustainability in architecture and urbanism should also be a question of developing building types and methods of urbanization that produce alternative and intelligent models of development in our contemporary cities. Through private practice, we have been developing projects and speculations on how building types and modes of urbanization may be re-thought to develop and speculate on new urban ecologies and life-worlds. Both realized projects and speculative research present images and potential prototype for our future cities that rethink the built environment’s collaboration with nature. The theme of sustainable development became a very hot issue in contemporary architecture during last 10 years, but it is still considered in many ways as technical solutions. A sustainable building is above all created from a high quality architectural design, combining two major elements—nature as a possibility and architecture as a controlled artificial support to nature. It will be focused to understand and establish a global thought structure about context analyse, program interpretation, arrangement, form strategy, and materials in architecture is a process of producing certain prototype. In each case, it must be produced taking account of the very proper cultural, social, geographical and environmental contexts. A sustainable architectural design is not a pastiche collage of eco-friendly elements to increase the building performance. It means rather an architecture that makes a society and culture want to keep for long time, thus this question approaches much more the essential theme of the architecture itself. The green design solution cannot exist alone in an architectural production process. It must be wholly integrated by a high quality design throughout the entire project design phases. It thinks to find sustainable things among the existing contexts, and make an architectural design in full harmony with its environment, using and intensifying these contexts.

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P-0118 (PDW A04-2)

Line Amplifier; a Boundary-less Tesla Factory Solving Socioeconomic Inconsistencies in Detroit

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Keywords: Detroit, Tesla Motors, City Revival, Robotics, Reconciliation

The goal of this project, Line Amplifier, is to make a factory and its office of Tesla, Electric Motor Company in the Motor city, Detroit, solving socioeconomic inconsistencies between manufacturing efficiency and human activities. The spatial design of the factory itself aims at creating a condensed and reconcile moment between them. For the rebirth of the Renaissance in Detroit, this proposal will coordinate with public transportation system at the center of the Woodward Avenue in Detroit. Like the automobiles have a feature of linearity, the building of the Tesla office stretches along the avenue so that the whole space contributes in connecting human activities and the city revival. The building is composed of undulating surfaces which structurally buttress upper robotic assembly line. Since every
floors of the assembly line is higher than the ground level, the building allows operation system of streetcar and the automobiles to drive underneath as usual. These transportation systems under the building maximizes the spatial usage of the inner space of the building as well, through increases of the factory’s accessibility to raw materials. Tesla’s energy storage system will support the electric power for the systems and will eventually revitalize the suburban as well as urban economy. It will result in the expanded range of activities of people at abandoned spaces around the 8 Mile Road and the introduction of this new building programs. The shape of the building maximizes its occupiable volume by having revolved axis of walls with the assembly lines on the intertwined surfaces. The movement of manufacturing robots, visible through exterior curtain wall system, celebrates the revitalized moment of the site beyond the geo-fixed nature of architecture so that Detroit will reactivate a technological attractor, which has been lost in the city.

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**Future / - Urban Design**

**P-0702 (PDW A05-1)**

**Open Infrastructure Energy at Airport City Kulonprogo with Wind Energy**

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**Keywords: global warming, airport city, wind energy**

In architecture there are several interrelated factors, first is factor occupants. These factors are always changing over time, this change in the form of physical and mental growth. Second, external factors are factors that always affect a design, including; climate, location, and context. And the third factor is internal factor is a factor associated with users, such as: the needs, habits and tastes.

Open Design is the idea the idea that a design done by pattern of thinking is open to all the issues that exist, so that in the process of designing an open character gets results. (Open collaborative design, 2010). "We should not to forecast what will happen, but try to the make previsions for unforeseen" (Habraken 1961). Open Building is the idea the idea that designing the environment is a product that continues to run, the design process that never ends, to the environment change the designing part, such as functions, spatial dimension, circulation in space, installation of infrastructure, thermal comfort (Husna. 2014) Openness is the idea that a design of several levels, level design (support) the circulation of road vehicles, mass governance, structure, and the shaft is a permanent urban design. while the level design (infill) dimensions of space, infrastructure, buildings, transport buildings, thermal condition and function of a design that adapts to user needs as well as their environment, because the draft is a draft that never ends and all rights to make design decisions like a professional , (Husna. 2014)

Based on the basic design of the open design, will be planned a themed areas design "Open Infrastructure Energy at Kulonprogo". Selection was based on the theme of development issues in KulonProgo Regency that would tend to damage the environment at the moment, ranging from the size of the area open, clean air conditions, and the mean temperature (local climate) .In addition, the construction can generating non architectural and architectural issues. The problem of non architectural form of increased prices of land, the amount of land conversion, and investors to control the land. While on architectural issues causing damage to the quality of the existing environment, such as reduced a lot of quality of air, water quality, reduction of green open area, and fishing each building using excessive energy that alter the local climate.

The existing condition of the environment in KulonProgo Regency is now a fairly comfortable conditions, such as temperatures ranging from 23-31 °C with a humidity of 55-95%, a maximum wind speed of 16
km/h from the north (BMKG D.I Yogyakarta). However, convenient conditions may interfere with the environmental damage that will be caused by the development of infrastructure. Therefore, it will be studied how to design Kulonprogo region by maintaining the quality of the environment without impeding infrastructure development of the city. It is estimated that environmental damage will occur based on the location of the existing problems. However, the quality of the environment must be preserved so that in the future the stretcher is still the same quality or better. One way to keep the environment is to minimize energy use impacting greenhouse effect.

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P-0579 (PDW A05-2)

Central Economic Environment Area Improvement by Applying City Walk Concept Based on Co-Design Approach: Setan, Sleman

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Keywords: City Walk, Co-Design, Market, Parking Lot, Street Vendors

The Setan Traditional Market is the central economic of Setan's environment. Vehicles, street vendors meet the sidewalk and roads in the market environment that causes the dense activity in the environment. The density of the environment is also caused by the Informal Afternoon Market which is located opposite the Traditional Market of Setan. So that required an environmental improvement in architecture to solve existing problems. Through the Co-Design approach where architects and community work together can get the best results in solving the problem. Based on the approach, the city walk concept is the best alternative to be applied in the Setan Traditional Market and surrounding areas. By applying the concept of city walk, Vehicles parked using parking lot system which is placed on private property at the will of the local residents, the street vendors are put into the market by using same mode, and market environment can be reached by pedestrian. Both the morning and evening markets are combined into a single market accessible to the public that operated into the night. In addition, the field is made open space with several street vendors. The longest duration to walk from parking area to surround the Setan neighborhood is approximately 7 minutes with the scene of commercial buildings appeared in indische style and the street vendors. The city walk concept is intended to improve the quality of the environment, which is currently polluted by the congest vehicle. The reduction of traffic jam in the area will give more space for pedestrians

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Future / - School Works

P-0732 (PDW A06-1)

Defragmentation: Open Building as a Strategy For Future Rental Housing – Case Study of Youth Community Design in Shanghai

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Keywords: Opening buildings, industrial design, defragmentation, residential buildings

With the Reform and Opening up, more and more migrant workers are moving into cities, which makes the contradiction between housing shortage and population growth the main problem of urban development. To relieve the sustained higher housing prices stress of young people, rental housing is
one of the effective means, however, the proportion of rental housing is still low in total housing, leaving considerable room for further rise. In the process of exploring residential design, the concept of international open housing has attracted wide attention due to its various characteristics. However, for rental housing, the traditional open building system still has some problems, such as the fixing size of infill units, low frequency of replacement and inefficient utilization of space. This paper explores ways to solve these problems on the basis of deep research and puts forward the concept of residential space of "defragmentation". "Defrag" from computer program operation in a term refers to the system software on the computer disk in the long-term use of the process of generating fragments and messy files to reorder, can improve the overall performance of the computer. From the computer defragmentation process to be inspired, the author of this project on the scale and continuity of the principles and models applied to the theory of urban and architectural systems. The author regarded defragmentation as a strategy for future rental housing, based on a youth community design in Shanghai. According to the level theory of open building, defragmentation is divided into three levels: urban level, building level and indoor level. Finally, use the open architecture approach to adapt to the living mode of sustainable living residential design to improve and explore the feasibility of domestic open housing development and development potential in order to propose a more adaptive and humane sustainable mode of living.

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P-0258 (PDW A06-2)

Winter Olympic Games Antarctica; a Frontier in Flux

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Keywords: -

Antarctica Re-Cyclical As the world is facing dramatic climate change, both poles are the last places on earth with consistent snow conditions. In the not-so distant future, Antarctica might very well become the only location on earth that will be able to efficiently host the winter olympic games. The proposal is for an event-based community that conforms and transforms to the ever-changing weather and environmental conditions of this region, made possible by a constant cycle and recycling of prefabricated building components. International Terrain Antarctica is without borders or a single nation holding any jurisdiction, therefore the future of this continent might rather take on a utopian ideal of being an all nations, thereby a 'global community'. It means the future Winter Olympics can be held without involving any politics or political issues. Furthermore, unique sunlight environment (in the summer time in Antarctica, there are 4 months in which the Sun never sets) and various time zones from the geographic south pole where time zones meet will set 24 hours working time free zone. Prefabricated Kinetic Elements Today any building in this region must be predicated on the prefabrication and flat packed building materials and technologies, as utilizing local materials and resources might destroy the fragile ecosystem and environment. Also robotic labor, kinetic components, modularity, and self organizing (computationally driven) systems will be part for the architects palette in developing ideas of the future of this region and its buildings and infrastructure. In this project we are suggesting prefabricated kinetic stadium modules that can be reconfigured and adapted to different sports disciplines, weather conditions and fluctuated spectators.

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Culture / - Building Design

P-0499 (PDW A07-1)

Revitalization of Shophouse in Hong Kong
– An Evolving Building Type Reflecting the Social, Environmental & Economic Development in Hong Kong

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Keywords: Shophouse, Adaptive re-use, Revitalization, Sustainability

Hong Kong Urban Shophouse (Tong Lau) resulted from pragmatic integration of early 20th Century Chinese customs and craftsmanship with then colonial safety and health standards. Hence this 1910s ensemble is a milestone of architectural development of Hong Kong. It not only to preserve the fabric, but also present to public this unique story of east-west cultural knowledge exchange. This project serves as vehicle to not only revive traditional building crafts like brick laying and timber joinery, but also inspire designers and train workers of innovative integration of traditional craftsmanship with modern safety and performance requirements. Especially, it points to new approach in preserving and revitalizing similar pan-Asian traditional vernacular architecture.

Sustainability is a concurrent balance of Social, Environmental and Economic consideration (UN Sustainability Summit 2005). The project pursued sustainable urban development by not limited to adding environmental features, but adaptation of holistic approach. Methods include: urban streetscape and community environment is revitalized, historic components are salvaged and re-used practically, traditional building skills are revived and improved, disruptive alteration is mitigated by pre-installation of fixtures without damaging historic features. Architectural conservation is seen not as superfluous but meaningful integrated component in urban regeneration.

This historical shophouse was not just preserved, but upgraded to meet modern use and aspiration, continuing its historic mission of old-new integration for another century.

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P-0413 (PDW A07-2)

Dream Place For Bookworms

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Keywords: Campus Life, Passive Design, Environmental Concern, Daylighting

Reading is going to be precious for college students in the age of Wi-Fi. Most young people prefer to use their electronic staff to get information and knowledge instead of traditional paper books. This bookstore complex work was designed for FuZhou Medical University, Fu-Zhou, China. Unlike other country, university students are required to live on campus for 4 or 5 years in China. In general, three are three situations that the designer had to face for campus buildings design. One is the daily living of students is quite simple within the dormitory, the classroom, and the campus cafeteria only. No other place on campus for their living needs such as the student center, the bookstore, the shopping area, etc. The other is the students are no longer have the willing to get the knowledge from library or a place with books. College Students are more likely to get the knowledge or information via using mobile phone with internet. Another is the global environmental issues are important to all the building design in China.

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P-0369 (PDW A08-1)

Yeo Ju Museum

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Keywords: Yeo Ju, History, Museum, Etymology, Historical tales

The new history museum project aims to establish the identity of Yeo Ju city, as a distinctive landmark. The history and culture of Yeo Ju have flown along with the Namhan River and the project site located at the riverside in a cultural complex district in accordance with urban planning. Representing the history of the city, the project is planned with studying the etymology of name of the city “Yeo 驪” which means “Black horse”. Through a rigorous research of historical tales, works of literature and the realities of the terrain on site, Yeo Ju museum is designed as the tilted black stone over a water pond. With the cutting-edge design, reflective black façade corresponds with the historical myth of a black horse story and the vision of the future city. It creates a new myth, “Legendary black horses ascend to heaven as dragons”. The horizontal gap between the front floating mass and the pond provides visitors unique panoramic scenes of merging with Namhan River which is the geographical origin of the city. The building is sitting on a long rectangular site in a way to reduce the change of the original terrain to integrate with surrounding natural landscape. Taking the existing museum into account, the new building is located slightly aside to avoid covering the front view. The overall spatial plan is to create open hall galleries for exhibiting large-scale national treasures and giving a lively spatial experience through visually communicating with visitors’ acts in different floors. A lobby hall with a water pond café is on the first floor leading to the main exhibition space on the second floor, and administrative offices and educational seminar room are occupying on the third.

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P-0191 (PDW A08-2)

More Center Complex & Huangyuan Administrative Complex, Architect: Wu Yue

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Keywords: Culture, Urban Design, Sustainability, Identity, Tradition

“More Center Complex” and “Huangyuan Administrative Complex” by Wu Yue, are two parallel design practices in coastal city and the inner-land town in China, which display the attitude the architect respond to different economy, climate, and culture conditions in modern context. More Center Complex: Located near the Xixi National Wetland of Hangzhou city, the More Center Complex with its total floor area spanning 120,000 sqm, is a mixed-use, highly-functional urban centre, which intends to promote the region's commercial prosperity. For this case, we were able to be involved deeply into the relevant design activities like urban design, architecture, landscape, interior, lighting and sculpture, providing us a great opportunity to control almost every design aspect of the project, in which, modern spirit, sustainability and culture were applied. Bold, yet moderate at the same time, the form of the More Center Complex strikes aggressively with its simple cubic volumes arranged in a black and white rhythm. In keeping consistency with the local landscape and context, reeds from Xixi Wetlands together with a piece of artificial wetland were introduced into the heart of the complex reflecting the linkage with both locality and culture tradition. Huangyuan Administrative Complex: Located in Huangyuan, Qinghai Province, Huangyuan Administrative Complex is consisted of three governmental projects—the Forestry Bureau, the Administrative School, and the Tobacco Company. By opening the first floor to the public with culture and tourism services, it creates an “extra” lovely civic plaza and an ecological park for the locals. Local materials like rocks and earth are extensively applied in modern design with innovative details. Sculpture and urban furniture were specially designed for the place, in order to build a true new “Huangyuan”.

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P-0156 (PDW A09-1)

Quanyechang Activities Center  
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Keywords: multifunctional, arts, museum, commercial

During the Ming Dynasty (1368-1644), the district of Da shi lan, South Tiananmen, in which lies the Quanyechang building, was the centre of the business district of Beijing. As part of the redevelopment of this area, Quanyechang was chosen to be refurbished into an artistic and commercial amenity, as had originally been the case, and to display museum pieces and arts and crafts. The project is an opportunity for the building to adapt to its new array of functions and to deal with potential future transformations while highlighting its intrinsic qualities. Laid out as a 80-metre long covered passageway and punctuated by three atriums, the new building hosts in its four storeys about 7 000 m² of exhibition areas, shops and restaurants, including a tea room and a multi-purpose hall. Project delivered in 2014

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P-0155 (PDW A09-2)

The Library of the University of Kitakyushu  
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Keywords: Layered space, ascending winding sequence, Eschelon formation, Stepwise space

Experience of Space in Architecture or Urban Space in certain culture transcends time. Even if the materials and technology to design and build Architecture differs from one period of History to the other, there is always a quality of space which is common between them. Modern Architecture aimed to create “Universal Spaces” and it has accomplished many goals with its rational construction method and materials, but many architects were cautious in making their designs excessively “Universal” and maintained critical regional quality in Architecture. The main idea behind the design of this Library is to explore how spatial legacy in Japanese architecture could be succeeded using commonly used methods of construction and materials. It is not a direct representation of Japanese Architecture, but it is a translation of spatial quality in Japanese Architecture, which was also the legacy of the Modern Architectural movement in Japan where Japanese spatial quality was pursued utilizing vocabularies of International style. Isoya Yoshida, Sutemi Horiguchi, Togo Murano and Fumihiko Maki could be named as Architects who made these efforts. The major qualities of spaces which follows this legacy of re-interpretation is as follows. 1) Layered Space, 2) Ascending winding sequence, 3) Echelon formation, 4) Stepwise space The present day requirement to create sustainable architecture was realised through the use of natural ventilation, utilization of rain water, rooftop vegetation and the use of low energy consumption lighting fixture. Efforts were made so that these technological features does not standout and disturb the spatial qualities outlined above. Learning commons of substantial size were created on the first floor to meet the present need for University libraries to be a center of Active learning.

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Culture / - Unbuilt Projects

P-0518 (PDW A10-1)

Tree Yard

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Keywords: Hutong, Tree, Yard, Library

Hutong is a miniature of the living space, the design of the courtyard retain a walnut tree, which records the changes of time in the courtyard, it is also the place of spiritual origin. As this to be starting point for the design, we first demolish the temporary construction, then plant trees on both sides of the walnut tree, in order to define three relations of the yard; the design transforms the existing buildings as a function of the SOHO, construct a open library into the corner, and using the lifting of the "ladder", provides a habitat diverse places under the tree for overlooking, communication, meditating in the vertical.

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P-0298 (PDW A10-2)

New Guggenheim Helsinki

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Keywords: City, Culture, Nature, Architecture

This proposal celebrates the importance of public space in the city in conjunction with the prominent waterfront to Eteläsatama and the advantageous proximity to Tähititornin vuori Park. The Museum exerts a powerful influence over its context, with a manner that underscores the ethical and ecological values and resonates with local identity. The design strategy is founded on an attempt to use the new intervention as a means of mediation: not so much as a new architectural object but as a spatial system capable of fusing cityscape, nature and architecture, focused on enduring values and a humane urban experience. The project consist of two primary elements: a long esplanade and a sophisticated timber shell. The exhibition galleries are contained within the shell while the rest of the program is allocated under the esplanade on the ground level. The above allows free access to all public areas as the private activities of the Museum are isolated.

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P-0246 (PDW A11-1)

Mix & Max the Cultural Complex - Maximize the Iconic Metaphor of Busan -

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Keywords: Historicality, Placeness, Amenity, Cultural Complex, Unequable Regional Development

Mulmangol bunker has existed from japanese occupation era. It was built to expand as military operation facilities in 1968. This bunker has been forgotten by the world and people due to the ceasefire so, it has been neglected as a unused equipment in urban area. But it still has had history of Busan chaos caused by war. Historically, Busan is city which, the biggest seaport and open, and representative post-mordern in Korea. And now it forms identity of Busan. Mulmangol underground bunker is
geographically located to border between strongly confrontation West and East-Busan, and at the heart of Busan. In the past, history of Busan was confused. But its history became a identity of Busan and represents that present and future of Busan Culture. Our proposal will be starting point to solve problems of uneven regional development of West and East-Busan. Also, it provide amenity doing revive historicity and placeness of Busan for citizens. Mulmangol bunker project will be representative for Korea culture complex that feel Broadway and Soho street, above the Busan. Role through making unique axis that unfold by bunker and spread to Hwangryung-Mountain, doing center axis of Busan culture.

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P-0242 (PDW A11-2)

No Boundary Permanence

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Keywords: Urban High-Density Residence, Modern Hanok, Energy-Efficient Architecture, Sustainability

A revolutionary residential model with sophisticated and precise masses, pleasant and spacious green space, convenient and economical residential infrastructure has been introduced. As the era of the municipal government opens, this new model, which was born to improve the urban life and improve the living standard, will change the landscape of the city without personality. According to the Population and Housing Census (2005), the number of housing units in the apartment complex in Seoul is already about 122,000, exceeding 52% of the total. In addition, apartment complexes, which are currently being supplied nationwide by redevelopment, new towns, and residential development projects, will peak at 2020. The rapid rate of increase in new residential models is attempting to change the landscape in our land and our life pattern into a sophisticated one. However, since the cultural level of citizens in postmodern society is also rapidly improving with the spread of information appliances, it can be expected that cultural saturation will occur before physical or arithmetic saturation. In other words, there will be an attempt to pursue diversity such as old or heterogeneous. Our goal in this project is to preserve the way of life in the existing modern hanok housing and propose it in the form of a new high-density hanok housing with the help of modern technology. We study on the form of modern hanok housing, moreover we implement architecturally the residents of the traditional hanok sit in the pavilion and feel relaxed and enjoy the flavor of the scenery as a function of the community. We have a high goal not only the energy-efficient architecture of modern high-density housing, but also the sustainable architecture in the hanok, and the space created by it will ultimately be a space that touches human spiritual level. This project aims to create a new type of housing by incorporating the emotional aspect that can be found in the old residential town (modern residential Hanok residential complex) and the physical convenience and infrastructure of the new residential town in the megastructure. This project provides a space where various places of the floor, the context of the area, and the memories of the terrain are preserved and connected. And the various communication and mutual actions taking place there form a kind of reduced natural city.

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Archaeology of the Ordinary: 
De-ritualizing Sun-Moon Hall Architecture to Everyday Infrastructure

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Keywords: China, Sun-Moon Hall, ritual reinvention, everyday infrastructure, participation

China holds extremely rich cultural layers in its ancient city; the soul of city had been produced and reproduced within a whole cultural-specific time-space institution through architecture as infrastructure, which relates to the lineage, the family-clan, the annual cycle, the seasonal worship and everyday rituals.

Sun-Moon Hall (Ming-Tang) had been an archetype for that Chinese cultural-specific soul of city. It was constructed as a miniature model of the cosmos, a place to communicate with the supreme deity. As so it was supposed to interpret branches of humanistic and scientific knowledge as a whole. Thus its manifold symbolism was governed by highly abstract elements such as measurement, direction and geometric shape, but all of which have been architectural references derived from the study of the innermost city.

The religious representation of the soul of city had always been informed through managements of liturgy, ritual, spatial tectonics and iconography. Influenced by the formalisation of Confucianism, Sun-Moon Hall shifted itself from self-presentation of a belief to the management of life. With the developments and transformations of rituals and liturgies, a principal term called Li-Qi constructed all the theology of space and activities. It was changed from material to shape, decoration, and inscription. It suggested the changing signifiers of ritual art from the most concrete to the most abstract, and from natural elements to artificial signs, ranging from building objects, musical instruments and small everyday objects in the city.

This research project reviews and reinvents the civic value of Sun-Moon Hall for its new architectural possibility in Chinese ancient capital Xi'an City, through unveiling and reconstructing the transformative form of Sun-Moon Hall from a primitive sacred space to a contemporary public space, engaging with the existing archaeological site, the project tries to reconstruct sacred space with a temple complex for thirteen traditional festivals and to give a contemporary understanding and relevance of rituals, nature and heritage. Through everyday participations, Sun-Moon Hall as a body of knowledge of cosmology, mathematics, astronomy, geology and musicology, provides a shared way for people to identify with the world around them, the past that has led to the present, and the future that may unfold. It triggers new public space for everyday practice through collective rituals. In this way this minor-type of architecture will be constantly reproduced and reimagined through local everyday lives, practices and acts. The conclusion is that architecture acts as an everyday infrastructure to constantly reflect to the changing time, seasons, surroundings, and most of all, the soul of city by interweaving two, the sacred and the profane.

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P-0761 (PDW A12-2)

Recall the Old Malioboro

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\textbf{Keywords:} identity, district, culture, street, atmosphere, malioboro

Malioboro is one of the most famous street in Yogyakarta city. Malioboro also one of the most busiest shopping district in Yogyakarta city. A lot of peoples around Malioboro using it as space for share local culture and show off some talents to tourist. This design is based on the previous research about Malioboro, we conclude Malioboro is part of soul in Yogyakarta city. As a soul of Yogyakarta city, it must present the character of the whole city in it. Malioboro already presenting their character through its building, culture, and its people. As the time goes by, the character of Malioboro start to fade off. As said by old timers that, Malioboro today, isn't Malioboro they used to know in their time. This design recreate the atmosphere of Malioboro in early 1990's, where there are less vehicles and air pollution. With this design, we want to create a better atmosphere in Malioboro as public space and can be used as a space for culture sharing. This design provide multifunctional space to used as culture sharing, street art and other public function. By harmonise the building facade and other public amenities with local culture penetration, the design is expected to reflect Yogyakarta city uniqueness. So people can enjoy Malioboro like the old times.

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P-0849 (PDW A13-1)

Manifestation of Reflections: Reinterpreting a Crematorium and Its Precinct at Varanasi

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\textbf{Keywords:} crematorium, edge, metaphysical, ritualistic, spatiotemporal

Keywords: crematorium, edge, metaphysical, ritualistic, spatiotemporal Wherein lies the soul. Is it at the pathway to infinity? Or is it at the inner sanctum of the enclosed space...or it transcends across the open volumes connected horizontally with the open space? Is it through the ambulatory pathway across the site...the “pradakshina” path that implies experiential and ritualistic movement pattern across the site or is it in the serenity of water bodies, beneath the foliage of green trees.? Is it evident by seeing it from levels or passing within them.? Or it resonates through the magnitude of sheer voluntary efforts ? The design of crematoria is the topic of this thesis. At funerary places, emotion and design meet each other. To make a well-defined and meaningful design, one has to know what exactly is happening at these places. Based on this aim, the question is: What should be taken into account while designing funerary landscapes in contemporary Indian society? Such spaces exist in three dimensions- narrative, emotive and sacred. While primarily responsible for space, architecture can also operate with metaphors to generate narratives of space. Secondly, character of space supporting a ritual,s a single entity or with other forms evoke a sense of dialogue with the form, it can assist an emotional response if thoughtfully and sensitively executed. Lastly, ritual that is supported by well-designed architectural space can sometimes present aspects of life that are otherwise intangible which finally which opposes the usual banal, odious journey through the crematoriums.? An exploration to understand architecture and spatial syntax embodying the metaphysical attributes that is not evident to immediate perception since it
sneaks at deeper psychic levels of existence and as Mircea Eliade says, a symbol, patterns reveal continuity between earthly and cosmic attributes.

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P-0605 (PDW A13-2)

Tugu Interchange Station: Transit Oriented Development Concept Emphasis on Cultural Heritage Building: Case Study in Tugu Station, Malioboro District, Yogyakarta Special Region, Indonesia

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Keywords: Tugu Station, Interchange Integration, Transit Oriented Development, Heritage Cultural Building

Keywords: Tugu Station, Interchange Integration, Transit Oriented Development, Heritage Cultural Building Yogyakarta is well known as a city of tour destination that creates the increasement in tourism growth gradually. Regional development is also growing rapidly, which resulting in the escalation of economic, social, cultural, and government activity. The important impact from the regional development is the emergence of a cultural shift potential of the local community. A city with the regular development in tourism aspect each year should be balanced with facilities and infrastructures especially in the transportation sector. Yogyakarta with its local cultural architecture has various types of building styles such as traditional Javanese building, Chinese building, Indiesche building and Jengki building. Meanwhile, the development of new buildings in Yogyakarta has not responded to the city's identity. Tugu Station is the oldest railway stops in Indonesia which has operated since May 2nd, 1882 that served departure and arrival of trains (KA) for executive and business class. Several problems arise, one of them is caused by the increased of tourism aspect in Yogyakarta where the station is still functioning actively to accommodate various tourist destinations in Yogyakarta until now. The main problem is the lack of access to public transport in the area of Tugu Station so there is no integration between the station with public transport. To resolve the problems those are at Tugu Station, this proposal is presented to show the plan for the development of Tugu Station as one of the buildings that can respond city's identity with the concept of Transit Oriented Development that has a role as a regulator of the circulation in a region, so that Tugu Station has a new function as an interchange station that has high accessibility and integrated with urban public transportation.

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P-0273 (PDW A14-1)

Loving Bali to Death. East Meets West

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Keywords: Culture, Tradition, Conflict, Convergence

It is possible to love something to death. In the space of 30 years, the island of Bali has been transformed. What was once rice field is now a luxury resort. In night time Kuta, the traditional calm has been shattered by a riotous cacophony of garish night clubs and drunken revelers. It seems culture and tradition, at least in certain areas of Bali has been thrown aside. Today's holiday maker can move from bar to beach without ever being confronted by ceremony or street cart. Perhaps the people of Bali are simply responding to a commercial imperative, but how much can we alter the cultural and architectural setting before we destroy the very thing that attracted people in the first place? To what extent should we accommodate the demands of foreign visitors? What is the role of design professionals in this conflict? What obligation do foreign designers have when working in this context? These are questions
posed for our visiting students in the three month Tropical Living program at Udayana University in Bali. Architecture students, mainly from European universities, are asked to design a villa and boutique hotel under the broader theme of "East Meets West". The students are asked to consider how we might design buildings for largely foreign users, with western amenity, in a manner that fully appreciates the sensitive cultural setting. Is it enough to just consider form making and material selection? Tradition, behaviour, commercialism, survival, environmental degradation and outright resentment – the situation in Bali is multifaceted. Remarkably varied responses from selected student work over this time highlight the different approaches to these questions.

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Culture / - Others

P-0889 (PDW A14-2)

Where Did the Parthenon Come From?

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Keywords: (No Keywords. Need to be updated)

P-0889 Where did the Parthenon come from? Dong Ho Choi*1 1 Architect, studio MADANGSORI architects & planners The Parthenon is standing on the Athenian Acropolis looks like a fine exhibit of treasure in glassed case of museum. Although this work has been damaged, but has value of more than the original. The aesthetics of ruins has its own noble breath. The beauty of the Parthenon as a representative temple was of Canon form along with entasis and design of deluded revision on the stylobate. The theme of ‘Ancient Aesthetics(in Greek)’ architecture was presented as Canon, numbers and optimum etc. Architectural beauty in Archaic Period and Classic Period, therefore, is realized as proportional to beauty, beauty of harmony in symmetria and architectural beauty of decorum and optimum. The Parthenon columns are rolling on the ground. The Parthenon in ruins, but beautiful. Augustine saw the new beauty. He looked for a beauty not as a displaying cruelty but found a new non-boring, some of the stranger in the midst of time. It was nothing less than the name of beauty, like a "the Most Beautiful in beautiful things" of St. Francis of Assisi The Parthenon as the traces of these beauty had the beautiful things. The Parthenon architecture had the Divine forces scale. This measure of architecture is in ‘aner tetragonos’. The Greeks think 'body can go into in the midst of a square or circle', also ' Man is the measure of all things'. Ficino explained “In what, then, does beauty consist? Beauty is not a property of bodies. it is not bodies that are beautiful, but the images of bodies which our eyes and mind create” If beauty is among the object, aesthetics of ruins in the Parthenon, then it is a borrowed beauty. Beauty and beautiful things have a clear distinction. Beauty is beautiful by nature, beautiful of and, in.itself.

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P-0764 (PDW A15-1)

Nandur, Ngunduh, Ngamal

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Keywords: Religion, Agriculture, Local Context, House of Wisdom, Building Society

Nandur, Ngunduh, Ngamal means Planting, harvesting, and giving. Melki is a village that have a unique culture of living. Mlangi is a village that have most
koranic school in Indonesia. Most of the village land is a ricefield. Here we design a house of wisdom concept for mlangi villagers, visitors, and students of koranic school. A different method of teaching Islam for mlangi villagers, through agriculture concept so people will understand Islam from agriculture view. For example we can understand live that given from god by seeing a plant grow. The design will be as natural as possible. Nandur, Ngunduh, Ngamal (NduNga).

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P-0593 (PDW A15-2)

Architectural Exploration of Inheriting The Soul of a City
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Keywords: city, heritage, culture, Japanese Architecture, Chinese Architecture

What is the soul of a city is a question that many architects and scholars are thinking about. In this paper, the author argues that the soul of a city is culture. The purpose of this paper is to explore the soul of the city, to explore the importance of urban culture to the city's soul, and to prove that culture is the soul of a city. This article will list many successful urban planning and landmark buildings in cities, gradually explore the unique culture of the city by referring to its successful reasons and construction process, and look forward to the cultural development of other cities, and finally determine the type of architecture that ultimately represents the city's soul. Through the analysis of many cases, this article finds that if a city is nurtured by its unique culture, then the city will be full of cohesion and hope, and this is the impact of urban culture on the city and the meaning of the soul of the city. Nowadays, cities are becoming more and more crowded, and their superficial prosperity cannot take on the role of cultural soul, but when the soul of a city needs to be redefined and re-positioned, urban culture will play an irreplaceable role and spiritual charm with its advanced spirit of the times and historical value. This article will explore the way to inherit the city's soul from the urban culture, and give full play to the advantages of architects and explore the soul of the city. Therefore, this article will analyze the architectural style of contemporary Japan to find out the ways by which the Chinese architecture can endow the city with an excellent soul and inherit the urban culture.

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Nature / 5. Urban Planning and Design

P-0645 (PDW A16-1)

Ecopolis City as a Soul Balancer of Kulon Progo City, Yogyakarta Indonesia.
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Keywords: ecopolis city, pocket farm, sustainable, energy, resources efficient systems

The construction of New Yogyakarta International Airport (NYIA) in Kulon Progo gives the potential multiplier effect of the most opposed main livelihood soul on their agricultural activity. Designing the green corridor which is manifested with pocket farm as an visual integration identity (connectivity space) between the new airport NYIA with the supported facility on the existing region. This connectivity space also form the public space such as sport area, playing field, and urban social gathering. Ecopolis city, a plan which is offered for answering the problems of multiplier effect aforementioned. With this in mind, the concept of sustainable of ecopolis city has emerged with the aim of reducing the negative effect of the new airport (NYIA). This sustainable concept will concerns in economic, enviromental and social.
Ecopolis city development that aims at the continuous improvement of eco city experiences. The parameter of the environmental side are managed and protected the natural and environment. On the economic side, the plan of energy saving, directed in the form of optimization of farm energy efficiency that will gives profit in economic sector. Local community or tourism, sustainable development is applied by reaching a standard living quality in local community to optimize the local benefit without losing their job as a farmer, maintaining cultural integrity, establishing social justice and provided a high-quality experience for visitors by design which is can be used and build community awareness in keeping their soul of city.

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Nature / - Building Design

P-0644 (PDW A16-2)

**Sustainable Gifts that Nature Offer to Humans**

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**Keywords**: Nature, Sustainability, Recycling, Healing, Metapolism

We are busy in daily life in modern society and do not feel the rich benefits of nature. Nature provides a shelter for those who desire a resting place to recharge their energy by escaping the stress of work. The gallery house, where you can enjoy the scenery of the four seasons, is located near the pine tree recreational forest, Anmyeon-Island, Chungcheongnam-Do. The gallery house, which is visible from the road 500m away, is approaching the familiar image in harmony with the pine forest. In the buffer space between the room made of loess and the living room, sky, land and people become one. From the open ceiling to the sky, you can savor the scent of pine trees, enjoy panoramic views of the front yard, and start and end your day. A room made of ocher to promote metabolism, a natural air-conditioning system of fresh air blowing from the pine forests, and a landscape view of green nature that are always seen face to face are provided in everyday life. Beginning with the blooming spring of various flowers, it becomes a daily life in the gallery house, admiring the whole world covered with green in summer, harvesting the grain in the fall, watching the world covered with snow on the branches in winter. In private space in the attic room, we spend time relaxing in the free world by enjoying the tea ceremony and arranging our thoughts. The gallery house also offers a rich joy of harvesting its produce. In addition, organic materials are harvested in a kitchen garden using wood ash, and solar energy is used to provide unlimited electrical energy. In this way, we are enjoying the abundant life while receiving sustainable benefits from nature free of charge, recharging leisurely and healing lives from nature.

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P-0158 (PDW A17-1)

**Qing Dao Railway Station**

**CLARIS, Daniel**

AREP, France / China

**Keywords**: seafaring birds, accessibility, intermodality, fluidity, services

Located on the east coast of China, the city of Qing Dao is one of the country’s biggest ports. In the 19th century it was colonised by Germany and was officially ceded to it by the Manchu administration in 1898 for a period of 99 years, but was taken back by China in 1922 following the war with Japan. In
2008, Qing Dao hosted the Olympic sailing events. Its new mainline station, which faces the sea, almost self-evidently seeks its inspiration in the symbolism of ports and seafaring birds with large wingspans. It was this self-evident symbolism that was unanimously acclaimed by the competition judges in December 2007. As in most Chinese stations built on this scale, the arrivals and departures lines are covered over with a "departures hall" – a full-blown bridging structure built over the tracks, from which passengers descend to their departure platforms. For passenger arrivals, and to minimise the pressures of large numbers and dense flows of passengers, travellers go down a level towards the metro, taxi rank and passenger car pick-up areas. This ensures that departing and arriving passengers never mingle. The main area of the "Departures Hall" and the seemingly complex shape of the roof can be guessed at from the repetition of a single structural module, which only varies as a function of its spatial positioning. The programme is therefore, in view of its scale, an apparently complex formal programme, but because it is modular it is economical and easy to implement. Ongoing detailed preliminary design studies factor in the climatic potential of Qing Dao in order to create a large-volume natural ventilation system for the hall in mid-season periods, designed to cut the operator's annual energy spending on climate control for the hall by 30%. Project delivered in 2014

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P-0157 (PDW A17-2)

Wuhan New Railway Station

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AREP, France / China

Keywords: yellow crane, accessibility, intermodality, fluidity, services

The new railway station in Wuhan, the capital of central China, is a symbol of both a centuries-old tradition and of spectacular economic growth, of the meeting of rural landscape and urban expansion. Its roof structures form two great wings around a central passenger concourse in an image that evokes the flight of a legendary crane that will return to Wuhan at the end of time. The garden, a transitional space between the station and the city, is crossed to reach the station, and frames a stone forecourt featuring the glass roof of the Metro. Like some balcony overlooking the city, the station also offers outstanding views of the lakes and mountains from its upper levels. Project delivered in 2009

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Nature / Landscape Design

P-0559 (PDW A18-1)

Tamboy Pet Park: Designing A Green Park for People and Pets in Yogyakarta, Indonesia

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Keywords: Park, Green, Reservoir District

Keywords: Park, Green, Reservoir District Tambak Boyo reservoir is one of the reservoirs are located in Sleman, Yogyakarta. The main function of this reservoir is a backup and groundwater recharge for the citizens of Sleman Regency, Yogyakarta. But over time, the reservoir district is often used as a means of recreation is fishing, exercising, and the leisurely strolling of the residents and their pets. The existence of Tambak Boyo Reservoir District be used as a public space with a very minimal

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development. There is no public facilities such as toilets, lighting, seating, signage and etc. Therefore, Embung Tambak Boyo District became negative space at night. It required a revitalization of Tambak Boyo Reservoir District. With the revitalitation, so that people more comfortable to move and assemble at Tambak Boyo Reservoir and eliminate the negative space at Tambak Boyo Reservoir District. From this background, the purpose of this work is to design District of Tambak Boyo Reservoir be nature friendly Park, accommodate the needs of humans and pets. The design method is using SWOT analysis, which can be the basis for formulating plans of priorities. To design and create the plans, using ArchiCAD software. Conclusions of this design work are Tambak Boyo Reservoir is divided into three segments of design, namely (1) First Zone is Parks Zone/ Green Zone. There are gardens and vegetation that can be used for relaxing, (2) Second Zone is Pet Playground Zone. Only dogs and cats can play in the pet playground, (3) Third Zone is a Health and Recreation Zone. In this zone, there is jogging track and fishing shelter for visitor needs.

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Nature / - Unbuilt Projects

P-0245 (PDW A18-2)

Collaboration with Culture and Nature

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Keywords: Urban Park, Urban Regeneration, Identity, Publicness, Placeness, Stimulus Theory

The site is located at the end of a moving line toward a more luxurious nightlife as it passes through the Hongdae subway station and into the parking lot through a small street. The Hongdae culture has been recognized as a place for cultural and experimental exchanges among young people who have built up the place character of numerous workshops and experimental indie cultural spaces with the openness to new culture such as art, music and design. However, since the subway in the suburbs of Seoul has been in operation since about 10 years ago, the speed with which the neighboring satellite cities have been accelerated, and as a side effect of it, Hongdae’s specialized cultural and geographical identity is disappearing, and its identity is becoming stigmatized as indifferent commercial spaces and entertainment spaces become established. Therefore, We would like to propose a new concept to communicate with the citizens while supporting the core role of Hongdae by bringing the landmark structure that meets the current trend into contact with the citizens. The site where this structure is to be established is located on the central axis where many people are gathered in Hongdae Cultural Street as the Hongdae cultural area moves from Seogyo-dong to Hapjeong-dong. The identity of Hongdae is the most international in Korea, and the youngest and the largest collection of diverse cultures in the world. In other words, Hongdae’s culture, which can not be compared with anything else, is the place where Hongdae itself has become diverse and has become a changeable culture code that touches the flow of the time first. So our proposal is to provide a place and a public area that can integrate various codes in the site. We would like to recreate the trace of memories of Eoulmadang-ro and restore the cultural identity of Hongdae culture and propose a device to collaborate with local merchants, cultural arts and visitors. In particular, it will provide publicity as a resting place, citizen's rights, restoring the identity of Hongdae culture and the identity of the place by offering a natural element that can relieve the irritation in the city center with excessive stimulation and it restores Hongdae culture’s identity and place identity with sustainable design that maintains accessibility for the activation and preservation of local commercial areas.

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Nature / - School Works

P-0758 (PDW A19-1)

100 Kids Village: Village For the Most Marginalized Street Children in Dhaka City

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Keywords: Street children, Maslow's Hierarchy of needs, sustainable development, Reggio Emilia approach

This unbuilt project's main objective was sustainable development and human well-being within nature. The project users are the most marginalized street children in Dhaka city. The aim was to integrate the children into a mainstream society where they will be self-dependent. Near a site in Dhaka, there is a site of 30 acres developed a master plan according to permaculture strategy. And the program of this project has been developed through the modified Maslow's hierarchy of needs and in regards to the sustainability of social, economic and environmental aspect. There are a dorm, school, vocational center, health center, income generating spaces, storytelling space, gardening space and community participation space. The whole design was done to keep eyes in the future where the children of futureless past can make a better future for themselves. And in building design, Reggio Emilia approach has been taken where children are given more than one opportunity to enter any building in this master plan. And the pathways and direction leading to these building are in the different environment and experiences like playground, garden, cultivating land, mini water body, forests, through a wall or building. And the material of all the building is concrete and jutin (a specially made material from jute) will be used. The zoning of the master plan of the whole complex is created in respect to the balance between the privacy and social inclusivity. Permaculture method of agriculture and social designing principle has been applied as cultivating land is a vital part of this project. The whole complex is like a self-sustainable village where the children will develop themselves by interacting with their surroundings.

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P-0575 (PDW A19-2)

Storehouse of the Earth: to Document the Fast-Changing Environment

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Keywords: Architectural Documentation, Environmental Changes, Swiss Alps, Glacier Blanket, Mountain Hat

In the book, Silent Spring, Rachel Carson argues that humans are one species that could modify its surroundings. As a consequence of accumulated modification, the site of this project, the Rhone glacier and surrounding area (11,500 years old), shows the drastic speed of change. Scientists estimate that this glacier, along with 94% others in the Alps, will disappear in 100 years due to climate warming. Also, when the speed of change is rapid like today, species that are vulnerable to small changes become extinct. This design proposal argues that architecture is a unique medium that can both document the changing environment as well as have a positive impact on the physical form. I propose two architectural interventions: a glacier blanket and mountain hat to delay change and to archive the physical and chemical remnants of the melting glacier and seeds of the endangered nival plants. The future scenario in which this design proposal is projected consist of four categories, Glacier retreat, Bio-Diversity, Tourism, and Infrastructure. I have extracted the future scenario that I use in this design proposal from different disciplines such as climatology, glaciology, geology, biology, economy and policy. Each of this discipline has its own scenarios, which stands alone. This design proposal proposes an occupiable documentation; therefore, in this proposal, architecture is both a medium to document and a space to archive. Finally, this design proposal will propose a new relationship between architecture and the environment by becoming a storehouse of the earth.

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Open Topic / - Building Design

P-0772 (PDW A20-1)
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Keywords: Space Tenant, Residence

With unprecedented economic, social and spatial development in metropolis all around the world, urban residents’ essential living space is much more crowded than before, especially in the centre of the city. In order to save money, people prone to choose smaller living space. Or they should pay more for residence to gain larger space. However, some of their living space is usually in the idle state. Thus, in order to improve the adaptability and the usage of individuals’ living space and relieve their financial burden, specific attempts in this study is to propose the concept of “Space Tenant”.

Based on the frequency of using various living space, we divided the space into two categories. One is necessary space, for long-term use, and the other one is periodic use space. Generally, people living in the long-term use space, which can be treated as a “basic unit”. This basic unit can meet people’s fundamental living requirements and people only need to pay for this basic unit. When people have specific requirements, which cannot be solved in their basic living unit, they can rent the periodic living space that is treated as a “moving box”. Then people just need to pay a little bit more for the extra moving boxes.

Nowadays, Internet is widely used. In this study, we also try to use the Internet platform, which assists people to book “moving boxes” in advance. In this way, residents can find suitable neighbours, whose needs match mutually, to improve the efficiency of information and space sharing.

Based on the background analysis and conceptual framework, we did a test case in Shanghai, China. According to the mode of “Space Tenant”, which can fit individuals’ elastic demand, this design aims to improve the variability of living space and relieve people’s economic burden.

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P-0752 (PDW A20-2)

Holistic Dialogues: Expression of a Built Form and Its Precinct

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Keywords: eclectism, regional, holistic, contemporary, greenery

Buzzing through our busy lives we all yearn to unwind. Set in a peri-urban area of Kolkata. Ibiza like its very name, strives to become a recreation for the mind & soul. Ibiza resort situated in Amtala, is a minimalist reinterpretation of colonial style around a water body, a contemporary re-imaging of the character of a ‘bangla’ bungalow along a ‘pukur-paar’. It’s a collaborative effort between the architect (ASAUDP), the landscape architect (PL Design, Thailand), lighting consultants, interior designers and client insights (Merlin Resorts). The master plan includes a hotel block, villas, a lobby, a banquet, stand alone bars and a spa. The idea of an arrival, loggias, canopies and walkways with arches and pitched roofs are the basic characters of the design language. Arched walkways, slatted louvers and iron railings with minimal ornamentation gives a colonial appearance. A feel of expanse into the nature and visual subtlety is by the sensitive inter fusion of traditional taste and contemporary minimalism. Away from the hustle and bustle of the city life, every room opens into the tropical landscape. The feel of transition to open greenscapes from the villas add to the retreat. Each twin module has been staggered in such a way that the visitor gets enough amount of private pocket space within the modules, for contemplation. West Bengal has a rich legacy of architecture as evident from the expression of the
The lush greenery along with the re-interpretation of its colonial heritage was the search in the design process. The overall design is an expression of the urban nexus of Calcutta, the city of joy.

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P-0734 (PDW A21-1)

Breathe in Millak-Dong

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Keywords: City, Variety, Dynamic, Combine

The mall housing project designed by Millak-dong of Uijeongbu consists of 7 buildings(779, 779-5, 780, 780-1, 780-5, 782-2, 782-3). These buildings breathe in the city called 'Millak-dong' with unified and distinctive features.

These 7 buildings are combined into two or more square masses and windows, each of which gives dynamics to the plan and the landscape. Furthermore, the various opening of the elevation that setback or extruding using the frame, making three-dimensional design. So, it provides a variety space inside and outside created by these buildings to the people who living in the space.

These buildings give the unified atmosphere of the whole street. The overall finished surface is made with mono tone and beige to create warmth in modernity.

Contrary to typical commercial houses in Korea, the bold housing design has a unique presence. As it is the mall housing, the openings in the lower floor are made transparent so as to increase the commerciality and reduce the weight of the whole mass. At the same time, the visual separation between the lower and upper floors has resulted in the sharing of a program of a completely different character. Each of the 7 buildings has a modern style housing configuration that can accommodate all types of nuclear families, from one to two.

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P-0648 (PDW A21-2)

Nomadic Journey

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Keywords: Nomadic, Heterotopia, Regionality, Editable, Editology

Purpose and background: Possibility to position a changing tourist hotel

Ellsworth Statler, father of the modern hotel industry, once said, "There are three things that make a hotel famous — location, location, location." In the past, hotels were generally located near a tourist attraction area, traffic-convenient location, or in a commercial rather than residential area to make it convenient for tourists to travel. This was because a 'hotel' was perceived as a place to rest for tourism purposes.

The concept of travel seems to have changed a lot from the past in recent times. The growth of the Internet and social networking services have made it possible for individuals to escape from fixed places and think nomadically. Urban nomads do not rely on a defined dwelling space, but edit the journey type to suit their own preferences to gain new experiences, fulfill expectations and satisfaction, and relax through deviations.
Traveling to other cities begins with a desire to experience a new local culture that can’t be experienced in the nomad’s own city. The recently trending Airbnb, or AirBed & Breakfast, is created based on the idea of providing guests with an airbed and breakfast. It provides actual ‘lived-in homes’ to travelers. As visible in the ad campaign, ‘You belong Here,’ ‘Traveling is living there,’ Airbnb provides a service that makes it possible to experience the area’s culture first-hand by renting a ‘house’ that is an actual residence.

Now the concept of ‘lodging service’ has completely changed; there is no need to be limited to tourist areas, and various events need to be created while being a flexible place that can be edited by the visitor and a place where they can experience the local culture and lifestyle.

**Method 1 : Possibility of coexistence with the original city center**

Sangdo-dong, where Handpicked Hotel is located, is a quiet residential area in an old city center away from so-called tourist attractions, which is a location of somewhat different nature for a tourist hotel. A culture of its own, such as the local market and alleyways that have been kept for a long time, along with the youth platform that was created by residents, has accumulated over time. This is a project that requires contemplation on the possibility of coexistence with the original city center, not simply value as a ‘lodging place’ where one sleeps and rises, but is an editable journey for the guest staying at the hotel.

**Method 2 : Multi-layer arrangement of a community complex**

Unlike typical tourist hotels, which only have a lobby, guest room and general facilities for guests, there are various facilities such as a fitness center, cafe and restaurant, as well as a designer shop, flower shop, gallery and library, making it a lifestyle hotel of comprehensive living and culture space. The community facilities, which can be a place for information and cultural exchange, are located in the easy-to-access basement and top-floor lounges so local residents can enter with ease and create a culture of sharing with travelers.

**Method 3 : A cluster of different private rooms**

The guest rooms are located in the central part of the hotel, separated from the community facilities. They consist of a cluster of rooms, creating privacy for each guest so they are not disturbed by anyone. There are a small number of rooms, in five different sizes and types so the visitor can select the room that suits their trip.

**Method 4 : Tactile scaling**

Using the bricks that are commonly seen in the original city center, the scale of the building is tactually converted to give it a familiar feeling, and the emotions of the simple neighborhood are captured by the displaying raw materials as they are, such as exposed concrete.

**Conclusion : Possibility of a nomadic hotel as a generator of various events**

Now the Handpicked Hotel has enabled the community complex as a regional infrastructure and hotel for modern nomads to coexist, and will serve as a space of escape to revitalize the stagnant locality. As a heterotopia where various events occur at the same time according to the selection and editing of individuals in one place, it will become a hotel that becomes the journey of city nomads.

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ten years g8a has had the privilege and opportunity to operate between Asia and Europe, gaining the capacity to creatively craft specific solutions, learning lessons and understanding cultural differences to inform each design project. Although challenges may differ the needs and problems of user-centric design remain vital constants. Through method, observation, information and knowledge we develop contextual solutions that cater to meeting the requirements of individual projects. g8a strives to reflect on the design processes it has refined year after year by exploring two social housing projects in parallel. Fundamentally, every building must respect its context and find a specific language to fit with its narrative. From the urban situation to the construction detail, each project has the design intent to create rich and diverse community spaces; various themes of visibility, identity, accessibility, sustainability interface to humanise the scale of the buildings. These combined create crucial spaces for communication and exchange, activating the ground floors for commercial and social activities to create strong connections with their surroundings, both physically and through the user experience. Although set in different contextual narratives, as we physically approach the buildings our perspectives give the projects new readings, playing on the transitions between small and large scale. Strong visual identities have been crafted into their respective urban fabrics, allowing for adaptation amidst ever-evolving challenges.

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P-0445 (PDW A22-2)

Making the Void Which Blocks the Wind but Creates Inner Community : the Void

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Keywords: Community Center, Void, Water, Public Bath

The Community Center in Aphae-do, Shinan-gun, Jeollanam-do is located on a special site, and has a special program. First of all, it was my first building project to be built on an island. Second, the main program of the building was the public bath and restaurant for the elders in the village. The elders, who make up most of the population in the fishing village, do not have a decent bathing facility in their home. Therefore, a public bath was necessary and it was going to be the center of the community. Just like the Baths of Caracalla in the Roman Era, this public bath was going to be the most important public space in the whole island. I've learned a lesson while designing the community center in the city of Gongju years ago. For ordinary city folk like me, the verdant, rich paddy through the seasons. When I revisited the site after six months away I found a translucent film had been applied to the large window. They had to cover up the window, because the scenery with the rice paddy reminded the farmers of the work they needed to do, which did not help them to relax. Recalling the lesson, I tried to avoid the view towards the worksite and created an opening towards the inner courtyard instead. A setback method was used to bring in more light as possible. For the islanders, who are always surrounded by water, a little pond was created in the courtyard so the people can surround the water. In this Community Center, people can gather around the water and relax without visibility of their work site.

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P-0443 (PDW A23-1)

Korean Traditional House Version 3.0 : Hanok 3.0

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Keywords: Hanok, Void Space, Korean Traditional House

Recently, many households are leaving apartments for detached houses. However, the single floor Hanok cannot withhold the density required for the contemporary life. The house was designed to maintain both high density space of two or more floor levels and also have a daecheong-like space,
which can be a transition space between interior and the exterior. This house adopted ‘three types of void space’ in between the living room, master bedroom, guest bedroom, parent's room, and the children's room. This is the Hanok 3.0 version, which has adopted a multi-floor type, an open type, and a variable type.

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P-0442 (PDW A23-2)

A House Within a House : Kangaroo House

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Keywords: Kangaroo, Courtyard, Void, Relation

Kangaroo House is designed for two generation family. The requested condition was to design a space where the two families could live together with tolerable interference. Especially, the request was to fulfill the both uses of space within a house – common dining area on the first floor for two families and private independent living space on the second floor for the son’s. In respect to the client’s demand, the interior space is composed of long and narrow rectangular courtyard and the two storey-high void in the kitchen. As a result, the two families form a “moderately interfering relationship” while they are physically independent from each other. The visual separation of the space is done by the use of different finish on the façade, where the brick wall envelops the parent’s house and the wood surrounds the son’s living space. The façade of Kangaroo House eventually illustrates the appearance of a kangaroo as the outer brick wall encloses the wood mass inside.

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P-0441 (PDW A24-1)

Controlling the Relations through a Fixed Wall and a Moving Wall : Mug Hakdong

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Keywords: Variable Space, Relation, Moving Wall, Transformation

Mug Hakdong is a building composed of a mixed program: accommodation and cafe. This particular building was requested as a flexible space that may be altered between a cafe and the educational facility in various forms. In order to create such variable space, we applied the series of movable partition walls, which can either rotated or folded, that configure the spatial overlap or the disconnection of space as needed. This particular space configuration allows the fluent transition of interior space, which results a building that can adapt various condition of different occasion.

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P-0439 (PDW A24-2)

Geomancy : a House Building a Relationship with the Surroundings

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Keywords: Geomancy, Nature, Feng shui, House

A geomancy, a traditional architectural philosophy of East Asia, is often used as a guideline for design of relations between the nature and architecture. When situating a building on a site, one of the theories
insists that “The building should leave a mountain behind but face the water in front”. According to the experts, the first-person experience is indeed critical in geomancy. Ssangdalri House is planned by a husband, who has been willing to dedicate a house to his cancer suffering wife. For the recuperation of wife, the general layout of the house was made by careful analysis of the site geomancy, which gave us a guideline for the space composition: “the kitchen in front of the rock in bamboo forest” and “the living room facing the stream in southwest”. The rooms in the house were evenly arranged in respect to the given guideline whereas the façade displays the unusual features – cantilever and vertical mass – against the typical pitched roof house.

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P-0390 (PDW A25-1)

The Future of Haebangchou

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Keywords: post-human urbanity, integration, biosynthetic

Haebangchon in Seoul is a collection of inhabitation community which are composed by the culture, history and rich human factor. Under the influence of a long historical background, Haebangchon village has become a diversified and complex place, but Haebangchon village can not fully meet the needs of the masses of life now. The reason is that the structure of the building community is formed over a long period of time but can not change deeply by the time. In addition, in the Internet era, the crowd of community is very easy to replace, for example, some residents moving out, some tourists entering, as well as the presence of shops; the function of the building is also very easy to change. The two unequal changing speed led the community is difficult to provide the best space for a variety of functions and needs. Our aim is to reflect a post-human urbanity through our design work. Using biosynthetic to create the future of Namsan to activate Haebangchon Village. Let all the people communicate together and integrate. Not only find the optimal character of Haebangchon Village in Seoul, but also maintain the existing and diversified feature at the same time to stimulate its greatest role as a very unique and vibrant place in Seoul.

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Open Topic / - Landscape Design

P-0548 (PDW A25-2)

Interpretation and Proposal as Intermediate Space For Restoration of Land

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Keywords: Restoration of the Land, Space, To Down Boundaries, Respect for Existing, Process

Lands are organic: They are not fixed in the status quo but constantly transformed by the surroundings, and contain, within them, memories of the long history. Memories of the lands were formed in layers according to the passage of time. The Namsan(name of Mountain) Yejangjarak restoration project related to understanding the land as an organism, memories and transformation of the land, and the relationship, and, ultimately, it was about the approach to architectural restoration of the land that embraces the nature and history. Saetjarak, which I proposed, requires deep understanding of the original form of the land. Lands imply various relationships and, therefore, must be understood as a space in process through which new relationships are formed. Instead of simply recovering the
topography, I wanted to create a tool with which to establish the spatial, physical, and humanistic layers with the surroundings. Furthermore, Saetjarak represents the space in spatial and temporal process whose value is created through its relationship with neighboring areas and memories of the land, rather than a space that simply arranged different zones of the city that can be immediately defined. This design embodies restoration with continuity through which a park is expanded into the city and the city into the nature, instead of restoring and finishing only the defined area, and, as a result, will be continued as restoration of the center of the north of the Han River area of Seoul.

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P-0170 (PDW A26-1)

Artistic Use of Industrial Wastes – Activating City with Art + Green

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Keywords: Waste recycle, Industrial parks, Activating city, Art + Green

In new urban industrial parks such as Tianjin Huayuan Industrial Park, roads often become boring and negative spaces, the spacious dimension and dull linear space lead to a lack of users. We hope to make sculpture artworks using industrial metal wastes in this Park based on cooperation of architects and sculptors, so that on one hand the wastes can be reused and on the other hand the intervention of “green art” can increase interests for pedestrian streets. Based on metal wastes of enterprises, a series of themes are designed to respond the spiritual elements of urban design. 1. Reflecting urban problems – Some sculptures point to air pollution and fog & haze (cat with respirator). 2. Representing themes of the park – Some sculptures represent the feelings of machinery and coldness of hi-tech city with chips. 3. Communicating spiritual aspiration – Some sculptures communicate the aspiration for natural landscape using the images of mountains, rivers and Taihu stone. 4. Responding traditional culture – Some sculptures respond traditional Chinese cultures using the images of some traditional items such as ancient cooking vessel, brackets ,four seasons and five elements. 5. Providing urban furniture – Some sculptures can be both taken as landscape elements and used as urban furniture such as bench. 6. Visualizing science and technology – Some sculptures visualize science and technology with special forms (tensegrity structure and fractal pyramid). Artworks are connected in series by aboratively organized plant landscapes, so that these streets can be a place of attraction for enterprise employees in this Park.

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Open Topic / - Unbuilt Projects

P-0767 (PDW A26-2)

Children’s Play in Urban Interstitial Spaces: Cities Shared Via Playgrounds

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3 Suninterline Architects, Republic of Korea
4 Seoul National University, Republic of Korea

Keywords: Urban Playgrounds, Interstitial Spaces, Community, Place, Bottom-up development

The playground has outstanding potential as a showcase for delivering children's vitality to the city as well as a place to meet others. The energy derived from children's play and informal relationships with others
naturally create a sense of belonging among the neighborhood and community. As such, by identifying places in Seoul that have this potential and inserting site-specific playgrounds, we aim to provide lively places that can be shared among neighbors, ultimately addressing social issues in Seoul such as diversity and alienation. This project intends to create a catalyst network to transform Seoul by gathering scattered interstitial spaces left over from the growth and decay of the previous model and transforming them into small human-scale urban public places that will foster children’s vitality. These cross-city networks throughout the city form a polycentric areas in the city and interact with each other. First, urban interstitial spaces are classified into types, and several prototypes are designed for each type. Second, various potential sites, including seldom used playgrounds that could be renovated, are identified within a region, and the prototypes are transformed to accommodate site-specific conditions, after which temporary structures, both removable and variable, are installed for trial. Third, once a place’s potential is verified after the trial period, the playground structures can be used permanently. This is suitable for contemporary urban life in that the relationship is not very close or continuous but is light and loose. By organically fostering such relationships, new playgrounds can become a place in the city revealing Genius Loci. Sprinkled across the city, these small places, each with a unique identity, will encourage diversity and function together as a network of positive energy that radiates into communities and other cities, eventually reviving the soul of the city.

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P-0763 (PDW A27-1)

Playgrounds in Shopping Malls: Reviving the Soul of City

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Keywords: Playground, Atrium, Shopping mall, Place, Community

 Nowadays, cities filled with homogeneous buildings are losing their soul, and the uniqueness of each city disappears. In that sense, the soul of city is profoundly associated with the concept of ‘place’ put forward by Edward Relph, who argued that places are disappearing in modern cities. In this situation, we aim to revive the soul of city through placemaking by starting with shopping malls, which are considered as the typical example of ‘non-place’ as mentioned by Marc Augé. A place is made when a space continually connects with human life. Although there are programs such as culture centers in shopping malls, they are often relegated to the edge of the mall, where they cannot play a leading role. We aim to introduce active community spaces into shopping malls so they can function not as a mere space but as a ‘Place’. Often found in shopping malls, an atrium demonstrates great potential as a place since it can accommodate many people in a visually connected space. For atrium as community space, we intend to examine the potential and energy of playgrounds as a way to create community spaces. Lively and animated playgrounds can energize cities. By actively arranging such spaces indoors, children will be brought into cities accompanied by adults and thereby making a place for a community where people’s lives flourish. Though traditionally a space for commercial purposes only, a shopping mall atrium combined with playgrounds can become a community place that nurtures the lives of children and adults alike. Enhanced by the placemaking of an atrium, shopping mall-mediated communities will be created throughout the city to foster key spaces of local communities. Such recreated community spaces will radiate the newfound energy and become seeds to revitalize a city’s soul by actively interacting with urban life.

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P-0420 (PDW A27-2)

Human Port; Evolution of ‘Whale Boiling Hut’

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Keywords: industrial archetype of whaling, coevolution, commune, open program

This project explores ways to revive ‘whale boiling hut’, had been considered as a base and economic vitality of the community in its heyday, which has been fallen since the prohibition of the whaling industry, by utilizing the unique typology of this place. This proposal is not just to restructure the ‘whale boiling hut’ and the site itself, but rather to creat diverse relationships between the site and the user by including the surrounding seas. Firstly, the ‘whale boiling hut’ itself and the neighborhood buildings which have wood-trussed gable-roofs will be preserved, and the building made of concrete which has been used as the residence will be demolished. The balance of the whole buildings and the external space will be rearranged. By connecting the buildings linearly in a simple manner, I want to secure the margins and distance to the periphery of the ‘whale boiling hut’. Secondly, ‘C’ shaped ‘Floating Dock’ is inserted in the sea diagonally at the west side of the site. The added ‘Floating Dock’ will be the pier of the ‘Aqua Bus’(proposed) connecting Jangseongpo-Ulsan's East side—the City Center, and will be a special visual-motional circuit that allows walking and looking at the sea and existing buildings on the site from various angles. The ‘Human Port’: Existing stores in the site will be local shops operated by the local cooperative. The subsidiary buildings on the west side of the hut will be provided as a tourist center and a neighboring kitchen for residents and visitors. Space program has great flexibility according to the demand of residents. The ‘whale boiling hut’, which is open to the sea, runs as a small ‘Whale Gallery & Lounge’ with the whale story of Jangseongpo, allowing anyone to have a memorable time by sitting around ‘whale boiling furnace’ and chimney.

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Open Topic / - Urban Design

P-0827 (PDW A28-1)

Gallus Commune: Chicken Breeding as an Autonomous Sustainable Communal Project

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Keywords: chicken breeding, community, sustainability

Keywords: chicken breeding, community, sustainability Living in a dense insufficient environment does not mean inhabitants of Waduk Melati, Jakarta, Indonesia cannot fulfil their basic needs of food through their own resources. For people living in this area, raising ayam kampung (village chicken) is a common thing to do, both as hobby and trading. Many resources, such as egg, feather, and manure, can be obtained and processed from chicken breeding activity. Chicken coop can also be easily found in every corner of Waduk Melati area. However, the site problem of overcrowding and low level of sanitary overshadow the indigenous potential that this area has. In order to improve the area living condition, a design project integrating the village’s potential of chicken breeding with community enterprise is created. Through efficient and organized system of village chicken breeding, Waduk Melati will have its autonomous way of living and persisting in between the high-end neighborhood surrounding it. The project utilizes the potential of chicken breeding, the existing natural assets, community embedded culture, and sustainable architecture. Several steps starting from within the smallest group of community member to networks of community are suggested as means to incorporate chicken breeding into local economy. The designs serve as flexible platforms to interconnect living and built environment and to develop resources into commodities or processed goods.

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The Re-organization of Urban Space in Bamako, Republic of Mali

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Keywords: -

The urban population in Mali is increasing by 3% annually and that of the capital city; Bamako has registered a tremendous growth, by 4.45%(2010). The urbanization of Bamako has influenced its physical morphology by enlarging its marginal and with the demand for housing far exceeding the supply by both public and private sectors, spontaneous areas have been created as the inner city has continue to be over-populated. With the increasing needs for houses and urban settlements, the government, has developed new housing projects. These new housing projects were based on increasing the supply of low-cost social houses, improving the living conditions in spontaneous areas and testing new construction materials. But even thought, these projects were unable to respond to the urban crisis as they were designed according to material and cost performances, rather than social realities, and therefore did not correspond to the living habits of their occupants. In Bamako, urban housing projects are urgently needed and we, found that the actual conventonal courtyard houses, serves as a realistic and practical starting point when planning sustainable urban housing suitable for the climate, natural and social conditions. Recently, it’s becoming increasingly common for multiple households, to live collectively in one conventional courtyard houses once inhabited by an extended family. This form is an important living style, more coherent with and inter-responsive to the life style and therefore need to be understood. In this presentation, based on several researches results, in which we found that spatial demands vary according to living activities; that the spaces where living activities take place shift in the course of time; and that the courtyards with limited area were flexibly used, we tried to develop a new design solutions for multi-family houses in Bamako.

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Open Topic / - School Works

Learnventure in Boundary Country of Sebatik, Indonesia (re: Learning Cocoa Plantation with Adventure Concept)

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Keywords: Country Boundary, Cocoa Plantation, Education, C2City Methode

Indonesia is an archipelagic country with abundant natural resources. Sebatik is a border area in which the island has one of the natural resources, the cocoa plantations. The learnventure concept seeks to raise cocoa plantations as an incubator of education in the state border area. The purpose of the design is to create a state border area as an education pioneer of the biggest cocoa plantations in Indonesia. Thus, the border area is no longer a region that is isolated and can be an independent area. As a fact, Sebatik area is included as one of the border areas that are isolated from the city center and eventually leads to poor development of the city at Sebatik. It is a negative impact towards the quality of education, such as: the lack of schools, lack of teachers, poor facilities and infrastructure of schools, access to schools is far away and the access conditions are very bad. C2City (Going Outside the Wall by Tamir Gabai) is a method that is used as a reference in the design. This method is used due to the compatibility between the methods and its application in the region, and that it is contextual. Particularly, the
paradigm that learning does not have to be at school in general gives an opportunity that the people of Sebatik can take advantage of the cocoa plantations as a space for learning. Other methods include the exploration of using digital media and sketches, a literature review, precedent, case, as well as analysing the region and conducting interviews with local communities in order to obtain accurate data. Indication of the results in this scheme is a design sample along with its design guidelines regarding the cocoa plantations education region in the border area.

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P-0547 (PDW A29-2)

Design Experiment For Sense of Place and Architectural Typology through Sublating Form

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Keywords: Place, Sense of Place, Making a Place, Ma-po, rehabilitate

This design experiment is a study about making a place in city by architecture. Architecture forms the city and in the same time, the city becomes the context for new architecture. Therefore, the city and the architecture are inter-constructive. Proper architecture is about making a place in the city. That time, ‘spirit of city’ becomes formed. Architecture must sublate(aufheben) itself form to make a place. Architecture doesn’t have to be aesthetic or creative form. The real aesthetic of architecture comes from place in the city. Therefore, in this design experiment architecture is a tool for making a place. And role of architecture, as a tool, is to rehabilitate ‘sense of place’. When place functions in the city and embodies memories, place receives ‘sense of place’. City which has absence of ‘Spirit of city’ can be rehabilitate by making a place.

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P-0472 (PDW A30-1)

Rural-Urban Life of Umbulharjo Village, Cangkringan, Sleman, D.I Yogyakarta, Indonesia

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Keywords: water scarcity, open design, guidelines

Yogyakarta as the Special Region has various privileges variety both in terms of culture, nature and tourism. One of the special nature of being owned Yogyakarta is a spring that located on the southern slopes in Umbulharjo Village, Cangkringan Sub-District, Sleman District, Special Region of Yogyakarta (D.I Yogyakarta). The Government of Yogyakarta has been planning the construction of those reservoirs at several points including in Umbulharjo Village. The site is also dedicated as a tourist area especially with the Volcano Merapi Tour that grows rapidly since the eruption of Merapi in 2010. Reading some ideas of developing tropical rainforest where the flow of rainwater flowed into reservoirs and then processed and transmitted as irrigation of agricultural land. There are lands were abandoned after the eruption of the yard is the potential development of horticultural crops. Rules plants used application can be integrated between the theories presented by Heinz Frick and Tri Hesti Mulyani in their book Ecological Architecture and the Asian Rural Life Development Foundation where the types and crops to be planted is a decision of the community in developing it. The first step in the process of urban design is based on the search of urban structure to strengthen the characteristic of an urban. At Umbulharjo Village there is the Yellow River that give shape repeatability on the main road and the shape of contour that give the morphology of an urban. This plan is supported by guidelines and land-use buildings. One is for homes that are close to the reservoir and the homes are far from the reservoir.

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Open Topic / - Others

P-0691 (PDW A30-2)

“MINNANO-IE” in the Emergency Temporary Housing Complex for the Victims of the Kumamoto Earthquake

KUWAHARA, Kenta; FUKUI, Hiroaki; SONG, Junhwan; UCHIDA, Fumio

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Keywords: Home-for-All, Resilience, Participatory engagement, Regional resorces, KASEI project

April 2016, a series of earthquakes with the largest measuring occurred in Kumamoto prefecture in Japan. As part of their project, Kumamoto Artpolis have decided to develop “MINNANO-IE” (Home-for-All) for temporary housing complex. We were in charge of designing “MINNANO-IE” for the temporary housing complex in Kiyama, one of the worst afflicted areas during the earthquake. We were tasked to design a meeting plan adjacent to the type 40m² meeting plan. We held workshops together with residents to discuss the functions and a place they needed. We placed the facilities and functions on both ends to secure a large one-room space in the center. We positioned the building so that it combines with the type 40m² meeting place to form an L-shape, grouping both buildings’ “ENGAWA” spaces (verandas) to partially enclose the open space. We also created a square where children can play outdoors safely, bordered by flowerbeds and a lawn corner. In order to clear the requirements for a 60m² building and a construction budget of 10 million yen, 105×105 cedar wood, the most common standard section size (in Japan) is used as the pillars and horizontal members to lower cost. The exterior walls are built using 105 × 15 cedar planks, while the furniture parts are made using 120 × 30 cedar planks. Upon completion, we held a celebration event with residents. The event is organized as part of the KASEI project with includes making rice cakes together, furniture assembly and making flowerbeds. Many residents have participated in the event, making Kiyama “MINNANO-IE” part of their lives in the temporary housing area, with plans to create community rules to put the shared facility to good use. We look forward to continue to support their resilience in the future.

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SS1-1

*Digital Design & Mass Customization in the Era of 3d-Printing*

**MA, Steven**

*Xuberance Design Inc, Canada / Hong Kong*

Today the common use of advanced digital design tools and techniques of using 3D-Printing involves, architects envisaging projects exceeding the boundaries of their practice. Architects are now developing a practice which stands at the crossroads of design, computer science, engineering and biology. Conditions for production in the domain of architecture are radically redefined by this convergence, as well as by the constant evolution of the processes and tools for digital manufacturing. The more advanced the technology became, the more refined and sophisticated detailing the 3D printed could become, and the size of 3D printed object can get smaller and smaller while others search for bigger prints size. 3D printing is gradually approaching customized human body scale, even in close contact with the human body as prosthesis are commonly use. With the latest developments, 3D printing is no longer just an experimental tool or representational model, but in all aspects can be used at a high level of application towards customize human body, such as dental appliances, health care devices, bone substitutions, fashions wearables, furniture and food applications etc. The combination of additive manufacturing technology and the digital design techniques, also creates the ambition to establish conditions beyond the usual, the known, the rational, the obvious and the simple. The use of 3D-Printing and the idea of “Mass Customization” allowed designers to emphasize the artistic and the expressive possibilities of arts and architecture. It also reflects general excitement, enthusiasm, energy and high spirits, because the richness of its content suggest strong, unique and potent elements.

SS1-1-2

*Case Study of Digital Fabrication For Complex Geometry & Parametric Buildings*

**KIM, Sungjin**

*WITHWORKS Architects & Engineers, Republic of Korea*

In order to realize informal architecture in easier and less expensive ways, Digital Fabrication technology should be adopted from the beginning of design process until the construction phase. Informal buildings have been developed and expanded around design of new buildings and now their scopes are extended to general constructions. Higher construction control and quality is required for the emergence of elaborate and sophisticated informal structures. Digital fabrication processes which are already commonly used in other industries such as car manufacturing, shipbuilding, and aircraft manufacturing are necessary to achieve better design and construction of informal buildings. I will tell the digital fabrication Process, engineering and construction process of informal buildings by explaining specific examples I have done.
SS1-1-3

AR-VR Drawing in Architecture

JUNG, Jaeheon

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Postmodern architecture requires a design that incorporates temporal, cultural and regulatory multi-layers. Uniform and international architectural practices are criticized by many scholars. We need to pay close attention to architectural design using AR-VR (Augmented Reality – Virtual Realty) technology, which is emerging recently. In this speak, the speaker will introduce AR-VR architectural drawings and explore future directions.

AR-VR technology in architecture provides it to experience stereoscopic information of building or urban space through HMD (Head Mounted Display) and motion controller on human scale. ARVR software is basically developed on Unreal Engine or Unity Engine, based on real-time rendering. In particular, AR-VR drawings can visualize a BIM (Building Information Modelling) realistically and implement HCI (Human Computer Interaction) through Actors as needed. Actor has a development process that combines architectural designing and computer scripting and has the role of reinforcing presences in virtual space. The ARVR drawing allows you to experience the place nature, light and shadow on human scale, opening and closing, sound, music, smell, scent and weather. This was difficult to describe from traditional CAD software.

AR-VR drawing provides a new UXUI of AR-VR equipment to enable the innovation of the design process. By letting users participate actively in the virtual space, the users can explore the virtual space themselves to use motion controller. With Big data and AI technology, it is possible to invoke the information necessary for the progress of the architectural design in real time or to combine them to provide the architectural design service. It is possible to construct architectural design process based on information or directly communicate with client. Intuitive and interactive environment services make user participation design very easy.

The emerging AR-VR technology transforms the existing design process and leads to a departure from the design approach of the liberal era. It is possible to design space based on user-centered or user-space relationship and placeness. In addition, it becomes possible to develop AR-VR software that can design and evaluate urban environments that include users, public concerns, and urban environments.

O-0289

Soundscape Design in a Commercial Open Space Using ANN Models

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Keywords: Soundscape design, commercial open space, ANN models

Attention on visual effects is insufficient in an urban open space design. Soundscape is complementation and soundscape design is being paid more attentions. In this paper, soundscape effects in the Culture Square of the Shenzhen Dong Men Pedestrian Street District have been systematically studied. According to subjective evaluations, the current soundscape is not qualified to satisfy physical comfort in terms of sound environment. Not only sound levels but also sound sources are considered to worsen peoples’ comfortable perceptions of the environment. They bring up annoyance to the square. Based on an intensive field study, this paper is focused on describing how to modify the soundscape of the studied square via applying artificial neural network (ANN) model. Based ANN model’s predictions, various soundscape scenarios have been explored to give a comfortable sound environment to the space. The optimal soundscape design of the space is obtained based on the best prediction ANN model’s anticipation and the result has been testified via virtual reality experiments. Eventually, soundscape design scheme better to provide delightful sound environment in a commercial open space is concluded. The result is aimed to help urban designers in doing a soundscape design.

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Korean Housing Architecture Urban Development

Special Session 2-1
LH, Spread to the Future of the World
Monday, 4th September, 2017
15:00-18:00 / 300 (3F)

SS2-1-1
THE NEW VISION OF HOUSING AND URBAN CITIES WITH THE EVOLVING ROLES OF LH

PARK, Sang-Woo
LH (Korea Land & Housing Corporation), Republic of Korea

SS2-1-2
Historical Review and Future Suggestion of Housing and Urban Design in Korea

KANG, InHo
Hannam University, Republic of Korea

The development of urbanization and residential culture in Korea can not be considered separately from the activities of LH(Korea Land and Housing Corporation) After the Korean War, LH has served as a driving force for the development of housing and cities in various directions, such as improving the quality of housing, leading to residential culture as well as supplying the housing in severe housing shortage situation. Based on the public role, LH has continued to supply and experiment with various types of housing to improve the level of housing. Today, however, the changing social and economic environment demands a critical review of the public role of LH. In particular, considering the recent situation such as the erosion of high-growth period, rapid changes in population structure, and rapid changes in values, it seems clear that the paradigm of the past can not deal with urban and housing problems. Large-scale construction methods, mass-supply based on mass consumption, are now becoming more difficult models to operate. Therefore, it is widely recognized that a new approach is needed to cope with the changing times in the future. This paper examines the nature of public housing supplied by LH, which has led to housing supply and construction, and how it has contributed to housing problems. It also diagnoses problems faced by LH as a public institution that has supplied housing and constructed cities in a changing environment. Through these reviews, I would like to explore the role of LH based on considering the development direction of Korean houses and cities.

SS2-1-3
The new attempt for Korean public Housing -The change of Design in LH public Housing

CHOI, Dooho
Tomoon Architects, Republic of Korea

LH (Korean Land & Housing Corporation) establish in 1962. Since 50 years LH supply the public houses in form of from detached House (in early period about 200-300 Houses) to huge apartments area in the new City.
In the early 70’s with the Gangnam developing in Seoul, the Apartments, which is standardized design, make the uninformed Housing complexes, which are base on the Regulation of ‘Land development Promotion act’, in large scale in the City.

In the progress LH develop the new method for the Housing complex design. The integrated design concept consider to the local conditions, urban design, CI design and etc.. In the 21C Commemorative Project by LH proceed not phasing by developing process in conventional way but following Process in Comprehensive development plan, which is gradually expand. For the success of this project introduced the MA system also.

Recently through the international and local Competitions LH try to make the various typology of housing complex, units and Design.

In consider that the Housing is a Public goods, the Supply of housing is important, but also new attempts by LH to good design site planning, good houses continue and play a leading role in Culture of Residence in Korea.

**Urban design guidelines as a determining factor of urban form to the Central Business District (CBD) in new town**

**KIM, Donyun**

*SungKyunKwan University, Republic of Korea*

Dr. Donyun Kim is a Professor of Urban Design at SungKyunKwan University (SKKU). He is the Director of Smart Green City Lab. He has served as a Commissioner of the Presidential Commission on Architecture Policy to and Committee on Green Growth to the President of Korea. He has been a Chief Planner of Seoul Digital Media City (DMC) since 1997. He has been working with the Presidential Office of Korea to integrate the ideas of city-making industries and smart sustainable technologies. In addition, he has been involved in a national research project of Establishing a Strategy for a Low-Carbon City. As the chief researcher of the project, he improved legal system and developed Green City Index. He was also in charge of the 2012 Yeosu EXPO and New Science City master plan in Korea.

Donyun Kim has designed and consulted Irkutsk Baikal Smart City in Russia, Danang Comprehensive Plan in Vietnam, and New York Penn Station District in the U.S.A. He is currently leading a national project that aims to develop new models for industry cluster in Danang, Vietnam, sponsored by the Ministry of Land and Transportation and UN Habitat. He has served as an academic advisor of the Asian City Forum in Shanghai.

He was the Conference Chairman of the 8th International Forum of Urbanism (IFoU) on True Smart and Green City in 2015. He has been a visiting professor and research affiliate of the City Design and Development group at Massachusetts Institute of Technology. Dr. Donyun Kim was awarded a medal from National Government of Korea for his distinguished academic and professional contribution.
Current Issues of Architecture and City

Special Session 3-1
Urban Regeneration

Monday, 4th September, 2017
15:00-17:20 / 307B (3F)

SS3-1-1

Urban Regeneration in Seoul: The Strategy & Action
KIM, Tae-Hyun
Seoul Institute, Republic of Korea

Seoul has continued to grow and expand dramatically for the last half of the century. In recent years, large-scale urban development projects are not feasible due to the reduced returns slowing the growth of population and workforce. Seoul needs to shift its urban development paradigm to urban management that addresses possible low-growth in the future. Seoul metropolitan government has established the first strategic plan based on structure and roadmap for urban regeneration, according to the enactment of a special law of urban regeneration. This strategic plan for urban regeneration includes Seoul metropolitan government’s vision, strategies, and target areas for the period of 2016-2025.

The Seoul’s strategic plan presented three strategies for urban regeneration including “promotion of customized rehabilitation for communities,” “settlement of urban regeneration system,” and “establishment of a sustainable base for urban regeneration.”

In order to promote customized regeneration for communities, the strategic plan considered various regional characteristics of metropolitan Seoul. It also diagnosed conditions for each subarea and suggested the direction and strategies of urban regeneration according to the type of the subarea in the Seoul city.

Considering the characteristics of urban regeneration that requires a lot of financial and administrative support by law, the number of areas for urban regeneration will be expanded step by step to minimize trial and error. We proposed monitoring and evaluation system for enhancing the execution power of urban regeneration projects and continuously supplementing the urban regeneration policy.

SS3-1-2

Dining Street Regeneration Project and Place Attatchment in Apsan, Deagu
HONG, Keong-Gu
Dankook University, Republic of Korea

The aim of this paper is to examine the determinants of residents’ satisfaction and place attachment in the Process of Street Revitalization Project. The factor analysis and stepwise regression are employed as the empirical analysis on resident's satisfaction and place attachment through the case of Apsan Food Street, in Daegu metropolitan city.

The major findings are as follows; First, they are the most satisfied with pedestrian-friendly road in items of physical plan and less satisfied with most of program items than items of physical plan. they all are satisfied with all of items In resident participation and all role players in the Process of Street Revitalization Project. Second, they are satisfied with all the result of the street revitalization project, especially, change to pedestrian-friendly road and their own community as well as the process of resident participation and the revenue after the project. The last, the influence factors in residents' Satisfaction and Place Attachment are ‘Resident Participation Factor’, ‘Role-Player Factor’ And
'Physical Plan Factor' by factor and regression analysis.

Going forward, this research will help us better understand these revitalization projects and find new ways to improve resident satisfaction and place attachment.

**SS3-1-3**

**Social Innovation Living: Wanwol**

**PARK, Jin Seok**

*KYUNGNAM UNIVERSITY, Republic of Korea*

The purpose of this project is to answer two questions. Firstly, what kind of architectural intervention could take place in deprived neighborhood of Changwon and secondly can the socially isolated communities be transformed into active urban players. Main intervention has been made to the territory of the doshouses, built in Japanese colonial era, where local communities have managed to modify its building fabrics to suit their needs and to create unique residential culture of Wanwol village. Notwithstanding its collapsing housing condition, the residents have shared unique local cultures, social resources, and family rituals for last 70 years; therefore, strong sense of locality and emotional tie has been embedded in the community.

The project challenges current typologies and design process of low-income home in Korea, and proposes social cooperative that would place social cohesion in the area by introducing linking social capital which seizes the vertical dimension of fragmented social structure. One of the most important aspects of cooperative housing is that the residents are in control of design decision process by means of the participatory design. The 2 years-long participatory design has developed a vision for affordable home and form of governance to control their living environment.

Architecturally, the residents could shape the architecture, with help by local professionals, to match the community's mutual needs. With limited financial availability, low cost tectonic and flexible internal planning are key to successful cooperative housing design. Socially, the proposed social cooperative is to take on with new affordable housing and communal facilities, where existing and new residents would live and work together. It consists of 7 residents and 3 professionals currently, which is able to respond quickly to the needs of the people living and working there. By participating in social cooperative, the residents have the right to take part in decision-making and obligation to manage the property and the adjoining areas.

**SS3-1-4**

**Life and Architecture in Garibong Regeneration area**

**YI, Jae Won¹, BAE, Woongkyoo²**

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The purpose of this project is to answer two questions. Firstly, what kind of architectural intervention could take place in deprived neighborhood of Changwon and secondly can the socially isolated communities be transformed into active urban players. Main intervention has been made to the territory of the doshouses, built in Japanese colonial era, where local communities have managed to modify its building fabrics to suit their needs and to create unique residential culture of Wanwol village. Notwithstanding its collapsing housing condition, the residents have shared unique local cultures, social resources, and family rituals for last 70 years; therefore, strong sense of locality and emotional tie has been embedded in the community.

The project challenges current typologies and design process of low-income home in Korea, and proposes social cooperative that would place social cohesion in the area by introducing linking social capital which seizes the vertical dimension of fragmented social structure. One of the most important aspects of cooperative housing is that the residents are in control of design decision process by means of the participatory design. The 2 years-long participatory design has developed a vision for affordable home and form of governance to control their living environment.
Architecturally, the residents could shape the architecture, with help by local professionals, to match the community’s mutual needs. With limited financial availability, low cost tectonic and flexible internal planning are key to successful cooperative housing design.

Socially, the proposed social cooperative is to take on with new affordable housing and communal facilities, where existing and new residents would live and work together. It consists of 7 residents and 3 professionals currently, which is able to respond quickly to the needs of the people living and working there. By participating in social cooperative, the residents have the right to take part in decision-making and obligation to manage the property and the adjoining areas.

SS3-1-5 (O-0271)
The Idea Stores as Urban Catalyst to uplift the Life of Residents in the London Borough of Tower Hamlets

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Keywords: Idea Store; Library; Learning; Urban Regeneration; Strategy Relocation; Urban Catalyst

The Idea Store of London is a unique type of educational community center that offers library services along with adult learning courses. It was initiated in 1999 by the London Borough of Tower Hamlets, where the usage of library was far below the average of residents in the Greater London. While the national average was around 50%; more than 80% of the residents are not using the library there. The new concept, “Idea Store”, was come up with after the in-depth surveys for 600 residents to ask the reason why the residents do not visit the library, and what will make the residents to go to the library. More than 50% of residents are immigrants from Bangladesh and Pakistan, and the strong character of the Borough is the mixture of “Rich” and “Poor”. Response to the answers of the questionnaires, Idea Store team came up with the strategic solutions to make residents to familiarize to the new library, “Idea Store”. Since the first “Idea Store” opened in 2002 in Bow, several others have opened in London: Chrisp Street (2004), Whitechapel (2005), Canary Wharf (2006), and Watney Market (2013). This paper will discuss about the impact of Idea Store.

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SS3-1-6 (O-0276)
Urban Pins: Modern Intervention as a Method for Urban Conservation and Urban Regeneration in the Changmen Historical District of Suzhou, China

CROSET, Pierre Alain1*; HOSKYNS, Teresa1

1 XJTLU, China

Keywords: Urban Conservation; Heritage; Chinese Urbanism; Urban Design Methodology

This paper discusses modern intervention as an innovative planning methodology to address the problem of urban conservation in rapidly expanding cities in China. In contrast to traditional master planning, the ‘urban pins’ conservation method currently in development by Professor Croset and his team at Xi’an Jiaotong Liverpool University in Suzhou enhances updates and upgrades existing city spaces through a combination of urban conservation and modern intervention. ‘Urban pins’ is a strategy for urban regeneration that involves the participation of architects, academics and students to regenerate the historical city through multiple strategic interventions at the architectural or the micro scale. This is an ad-hoc strategy where any existing building, independently from its historical and architectural value, could be the base for specific interventions, without the necessity to define a global planning for all the area. Incremental development, bottom-up initiatives adaptive reuse, artistic installations, upgrading of public space become the new keywords. Conservation and innovation are considered together, and architecture is defended as a practice of “making urban transformation”, and not only of design.

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SS3-1-7 (O-0469)
Of “Other” People: Subject Construction of Chinese Diaspora in Boston’s Urban Regeneration

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Keywords: subject construction, Chinese diaspora, public space, Boston

This article draws on field research in Boston Chinatown to empirically investigate the configurations and representations of public spaces contributed by the process of urban regeneration in the US, wherein the spatialization of subject construction of Chinese diaspora takes place. The Chinatown Park, as a part of the “Big Dig” project, was proposed by Boston City Council in the 2000s to provide a one-acre green space for this dense area. The goal is to build a “Chinese and new” landmark to serve the local people; and it is principally designed by a Chinese land architect trained at Harvard Graduate School of Design. However, Chinese-style elements in the park’s landscape have not been appropriated by the diasporas. Many of them, especially those from Taishan, turn to use Mary Soo Hoo Park as their meeting point, which is an informal open space surrounding an underpass nearby. Here emerges a dislocation between spatial practices and representations of Chinese diasporas in Boston. While Boston City Council treat the Chinese diasporas as “others” from China in the implementation of the city planning, the diasporas are rejecting such exotic imagination of themselves through spatial practices. In this article I want to illustrate that two processes have been shaping their identity and reified in the public spaces: on the one hand, it is bounded by historical conditions in which hometown-ties were crystalized through family associations in the era of the Chinese Exclusion Act. On the other hand, their identity is reshaped by the urban renewal process when capital accumulation has been dominating the new spatial ordering system – those people who still use Mary Soo Hoo Park are “left behind” because they cannot afford houses anywhere else. The newly built but socially avoided Chinatown Park hence gives a lesson for making reflections on not only “China” and “Chinese” but also the self-other dichotomy in general.

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SS3-1-8 (O-0594)

The Marathon-scape: Street, Sprit and Democratization

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Keywords: Olympics; Democratization; Governance; Urban Development; Marathon

Cities are perhaps the places which are the greatest challenges to democracy (Amin et al., 2000). In order to live together, we continuously need to negotiate not only to solve problems, but also to create new solution. In that sense, the physical environment, street, is the result of this negotiation among various actors such as citizens, architects, urban designers, planners, politicians, bureaucrats, NGO, foreign investors and more. In 1988, Seoul’s Olympic marathon street course, which traversed a 42.195 km route, served to display the city's rapid urbanization and economic achievement through the media. It was planned development by elite bureaucracy and market without citizens. 25 years after the event, some sections of the Olympic marathon route still act as the core of the capital city, while others have either already been transformed through the redevelopment, and citizen becomes key driver. This paper tries to explain Korea’s democratization process through the evidence of Olympic marathon route.

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SS3-1-9 (O-0787)

Design Strategies on Smart Long-term Care Community Planning based on Big Data Management

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Keywords: Design strategies, long-term care community, data management, big data

This paper analyzes the shortage of current hardware endowment facilities and software pension services in China’s long-term care community, combined with the implementation of “9073” pension mode. On the basis of medical collection, combined with “big data” method, the planning of smart long-term care community would use the process of data management, including the collection of site environment information data, health care data, spatial and temporal behavior data, etc. With the collected data, the medical care service needs of the elderly and the community activity space would be analyzed, to set up the basic database, the service subsystem as well as the operation system of the information management center within the smart long-term care community based on “big data”. The objective of this paper is to have a comprehensive understanding of the needs of elderly users through the big data analysis, so that to allocate the internal service facilities and resources of the community scientifically and rationally, to create the age-friendly physical activity space and to achieve sustainable renewal of the community.

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SS3-1-10 (O-0352)

Spatial Politics of Temporary Reuse of Urban Vacant Spaces in Seoul

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Keywords: urban voids, uneven urban growth, spatial politics, temporary urbanism, developmental state

The long-term neoliberal restructuring since the 1970s appears to have intensified ‘uneven urban growth’ and ‘social isolation’ not least in advanced capitalist cities. While the recent global financial crisis in 2008 has led to property market decline, the uneven distribution of spatial resources seems to have deteriorated, giving rise to increase of redundant, derelict, and vacant urban spaces, which I refer to as ‘Urban Voids’ in this paper. Yet, while the spectrum of urban voids is diversified and amount is growing in the context of neoliberal austerity, the precarious urban condition is to be deemed a ‘reasonably good crisis’, acknowledging urban voids to be affordable ‘testbed for change’ not least in favor of lower social groups that have been likely excluded in the uneven urbanization processes. In response, there have been attempts of global city governments to create experimental platforms for ‘reusing of urban voids’, thereby encouraging more marginalized groups to join their place-making processes. However, it is apparent that the institutional responses vary widely from city to city with different social, cultural and political context. In this sense, this paper gives particular attention to reusing of urban void in the institutional context of Seoul. Drawing on the case study; the Jongno Saga Job Creation Hub in Seoul, particularly, aim of this paper is to elucidate spatial politics, which is constructed during transformation of urban voids, by identifying roles and aspirations of multiple actors involved in the case study. The findings suggest significance of the mediating roles of coordinator groups and their intrinsic limitations in initiating and maintaining reuse of urban voids in the planning context of Seoul where there is still the legacy of lingering developmental state.

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IT & ARCHITECTURE

Special Session 1-2
Digital Design & Fabrication
Tuesday, 5th September, 2017
10:00-12:00 / 307A (3F)

SS1-2-1

New Art & Craft Movement - Robotics in Architecture
LEE, Kyu Hwan
MXM Architects, Republic of Korea

He will talk about how digital design process & fabrication can change architectural practices in near future. The presentation material will include his research trip's report published in 2016, titled "New Art & Craft Movement - Robotics in Architecture", that has been funded by Korean Institute of Architects as a part of Young Architectural Fellowship program in 2015. He will share his experiences with his digital fabrication tools such as industrial robot arm, multi-axis CNC machines and 3D printer and will talk about a new craftsmanship and an architect's new role in future.

SS1-2-2

Parametric Design
SUNG, Woojae
Grimshaw Architect, Republic of Korea

I would like to bring up the idea of bottom up design process in a context of parametric design. This molecular approach, as opposed to more traditional, top down design process, changed the way how we design certain things. The traditional design process where we set up holistic framework and gradually run down to specific parts still maintains good hold on most of design processes, but the new approach enables us to do something entirely new by doing things exactly in an opposite way.

SS1-2-3

Digital Optimization / Fabrication of High-Rise Buildings
SHIN, Heechan
ARUP, United States of America

The simultaneous maturation of two aspects of digital design is having a profound effect on a designer’s ability to better investigate the “optimal design” for a given project. First, we are seeing increasing user-friendliness of environmental, structural simulation, and analysis programs. Second, we are seeing the adoption of parametric modeling enable more precise processing to fabrication and construction while preserving Value Engineering (VE) in High-rise buildings.
SS1-2-4

**Autonomous Construction**

SCHWARTZ, Mathew  
New Jersey Institute of Technology, United States of America

Robotic fabrication has had a tremendous impact on the architectural practice in recent years. In particular, the use of pre-fab has enabled low cost customization within the construction process. This has been possible through advances in robotics which have increased stability and access to customized fabrication processes. As robotics research furthers, new possibilities in fabrication come with it. From pre-fab to on-site, this talk discusses how architects and researchers can push the envelope into the future of robotic fabrication from industrial arms to autonomous and mobile robotics.

SS1-2-5

**Digital Craft_material & machining-based design and fabrication process**

SHIN, Donghan / KO, Minjae  
BAT, Republic of Korea

Industrial robotic arms are versatile. The functions of a robot vary with the types of tools mounted on the end-effector, or robotic hand. A wide variety of tools ranging from hot wire to 3D printer nozzle are mounted on it, and research on their application is being conducted together. This will have great effects on the change of design and fabrication processes in the areas of architecture, arts, and design. This presentation will cover the operation of industrial robots by using a parametric tool called Grasshopper and the introduction and utilization of it in the construction and design fields. Moreover, we will discuss the changes in the attitude of designers toward materials and shapes and the changes in design and fabrication process, which arose as we start to use robots more extensively.

SS1-2-6 (O-0266)

**Computation as a Driver for Quantitative Design Decisions**

ALHADIDI, Suleiman  
1 BVN, UNSW, O(n) Studio, Australia

*Keywords: Environmental computation; Performance Driven design; Quantitative design decisions*

Sunlight in public spaces shapes the character and rhythm of cities, they have the power to control how people utilize them. Major cities councils such as Sydney and New York councils have adjusted their planning regulations in the last few years to limit the impact of new developments on their public spaces. Recently imposed guidelines, such as the State Environmental Planning Policy No65 in New South Wales (SEPP65) and No Additional Over-shadowing legislations in Australia, have challenged design methods; requiring residential buildings to be designed based on more prescriptive environmental performance requirements. This paper looks at a computational design method developed using quantitative solar analysis to measure planning compliance and the impact of planning proposals on public spaces and reduce the overshadowing impact on surrounding residential buildings and public spaces. A computational design method has been developed based on environmental and financial metrics to satisfy both the planning controls and the client's commercial interests so as to produce rapid design alternatives.

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Current Issues of Architecture and City

Special Session 3-2
Public Building as a Catalyst for a Change
Tuesday, 5th September, 2017
10:00-12:00 / 301A (3F)

SS3-2-1
The strategy of small and medium city revitalizing by public buildings, Yeongju, City
Revitalization Strategy through Public Buildings – focusing on Yeongu-si(city) case
SEO, Soojeong
AURI, Republic of Korea

Yeongju-city, a small city with a population of 100,000 and a representative shrinking city in Korea, is implementing the ‘Place Making Scheme’ strategy utilizing public buildings for Yeongju's urban revitalization. Followed by ‘2008 Integrated Master Plan for Public Buildings’ for Yeonju, many urban regeneration projects has been delivering on regional hub places of the Master Plan. This strategy also contributed to recovering local community so to regional rehabilitation by utilizing vacant public buildings. The local government also instituted ‘Public Architect System’ for public buildings’ design quality improvement so to change administration-driven public building construction process to experts- and building users-driven construction process, establishing community participation and design governance system.

It has been 10 years since ‘2008 Integrated Master Plan for Public Buildings’ was established. Yeongju-city now observes those urban regeneration projects’ positive results. Active cooperation between administration and residents through public buildings is a good example of the result.

SS3-2-2
Medellín, a citizen project. A city for life.
PÉREZ-JARAMILLO, Jorge
(UK) Kings College, Colombia

The process of urbanizing Medellin and of developing the surrounding region over the last century and especially during recent decades, shows how it has been possible to confront the highly-complex and conflictive conditions of urbanization, based on collective ways of planning and intervention for the city, forwarding in a consistent way the building of a society that promotes an inclusive urbanization with coexistence as essential for life.

The case of Medellin exemplifies experiences with urban, social and territorial planning and management that have evolved as instruments for building a long-term civic project which, on the basis, of social and civic agreements, has permitted a shared vision with continuity in policies and processes, and thus, the achievement of transformational results for public life in the context of municipal democracy.

Worldwide attention regarding the city’s experience, expressed by means of prizes, research, and diverse assessments, among which may be noted the recent Lee Kuan Yew World City Prize 2015-2016, is justified, given the magnitude of the challenge facing the world today. If we want to build a more viable planet for the future, we must confront urban sprawl, global warming and urban conflicts, as well as the very difficult questions arising from growing poverty and inequality.

Medellín lived through one of the deepest crises known and, was able to convert it into its greatest
opportunity. Having understood this experience as a moment for self-questioning and for rebuilding its community, we were able to understand how a society could build an agenda of resilience, towards a "City for life", as Aníbal Gaviria Correa, former Mayor synthesized it in his government from 2012-15. This was done utilizing strategies of institutional development and complementary tools for social and land-use planning, such as urbanism, architecture and infrastructure, all complemented with processes of community organization, participation and democracy, and a broad fostering of innovative ways of intervening in the city.

SS3-2-3

Public building which communicate with a community: Kanazawa Umimirai library & Yamaga elementary school

HORIBA, Horiba
Coelacanth K&H Architects Inc., Japan

Not the building which there is anywhere, the building only unique in the local area is demanded for the local community. Our architecture aims to be loved by local people for a long time and to be a base for various activities. So, I would like to introduce two our works.

One is “Kanazawa Umimirai Library”. The bright and large one-room space, which is necessary for the function of reading books, is symbolic of this library. It has an attractive as a place that local people in the long, snowy and gloomy winter wants to visit there. Mainly on books, it is loved as a new symbol of this town and, also a place of new communication.

The second is “Yamaga elementary school”. This elementary school, the oldest in this area, is a wooden building with a devised framework which make use of local timber by local carpenters. I hope schools, where children grow up, can be a proud architecture in the local area. The arrangement created with old main roads in this town as the model, is possible for residents to go through the school zone because the ground and the town connected to the next shrine.

In addition, the school is contrivance so that it can be used for summer festivals in the town.

Both of two buildings are attempted to make use of regional culture and climate in architecture. By the culture trait of architecture, the space created in this way become an attractive space that can be called “a natural space”.

Special Session 3-2A

Eunoïa- Lecture from LG Hausys com

Tuesday, 5th September, 2017
10:00-12:00 / 300 (3F)

SS3-2A-1

PARK, Sungmi
LG Hausys, Republic of Korea
Special Session 4-1
Tuesday, 5th September, 2017
Open Building Session 1: Open Building Strategy.
10:00-18:00 / 308A (3F)

SS4-1-1 (O-0247)

The Adaptability of Collective Housing in Japan
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Keywords: adaptability, lifetime, housing, infill

In Japan, the Japan Housing Corporation, which is now called the Urban Renaissance Agency or UR, universities, and private companies have jointly conducted research and development under the leadership of the national government and Ministry of Construction. In the first half of the 1970s, the research resolved the problem of the short supply of housing, and since then it has improved the quality of housing. Research and development by KEP since the late 1970s and by CHS beginning in the 1980s contributed to the KSI and to the enactment in 2009 of the Act Concerning Promotion of Long-Life Quality Housing. My research group is conducting a tracking survey of the Japan Housing Corporation’s test housing KEP. In the housing estate that we surveyed, although the dwelling units were the same size with identical layouts, some had movable storage walls and movable partition walls but others did not have these features. We confirmed that in order for families to continue living in a dwelling unit of about 90 square meters, they effectively used the movable partition wall systems. This research analyses how the efforts to prolong the lifetime of housing by increasing the adaptability of infills worked out in Japan.

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SS4-1-2 (O-0906)

Open Building Application in Saudi Arabia
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Keywords: Adapatability; Construction; Flexibility; Housing; Open Building

In Saudi Arabia the concept of open building and supports systems is relatively new and not yet properly known, nor there is sufficient research or technical knowledge regarding the subject within the construction field. With almost no evident applications, the closest implementation that can be seen depicting the skeleton/infill system of open building is in the form of open plan floor designs which are also limited to multi-use/commercial complexes, public and office buildings. However, as the conventional construction method in Saudi Arabia is a post and beam construction using reinforced concrete and cavity brick structure, this gives a degree of potential flexibility in the organization of the internal environments of buildings without much effect on the bearing structure. The aim of this research is to analyze and describe the technical possibility of adopting and applying the Open Building systems into the housing sector in Saudi Arabia. This paper describes briefly the different housing types existing in Saudi Arabia and the current construction system being used, and analyzes a post and beam model of an apartment building to understand the possibility of adopting the application Open Building systems into the housing sector.

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Open Room: a Prefabricated Solution for New Strategies in Hospital Flexibility

S. Capolongo¹; A. Brambilla¹; M. Gola¹*; OPEN BUILDING Group²

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Keywords: Open building, open room, flexibility, healthcare

Objectives
The aim of the paper is to apply the Open Building approach at the room scale, developing a meta-design solution able to address flexibility through prefabrication in the future healthcare environments.

Background
In recent years several studies have revealed the increasing rate of hospital obsolescence. This fact is a reflection of the fast pace at which contemporary society, medical and technological knowledge evolve. Several scholars underline that in the next 20 years 80% of medicine will change. Ancient hospitals, such as the “Ca’ Granda hospital” in Milan, used to offer services for centuries. Nowadays hospitals have to face with rapid changes of about 50 years due to the increasing rate of structural, medical and technological obsolescence. Therefore, architectures for health must be resilient and able to adapt to unpredictable social, economic and clinical/epidemiological changes within different country’s healthcare systems and organizational models. Nowadays architectures for health have to embed flexibility at the beginning of design process. Several attempts have been made in the history of architecture from utopic visions to more technologically driven approaches in order to achieve flexibility in design, often showing weakness, rigidity and expensive results. One effective strategy is the constant surface approach of the “Open Building” into healthcare facilities, which consists in the separation of a building in layers: Primary, Secondary and Tertiary systems.

Methodology
Within an Alta Scuola Politecnica multidisciplinary project, the concept of Open Building has been applied to a room scale (Open Room). The process began with a preliminary analysis of the State-of-the-Art concerning flexibility and prefabrication in different fields and in different ages. Through to the scientific literature and some visits to relevant hospitals in Europe, interactions with designers and chief medical officers, it was possible to understand the current trends and market needs. The meta-design has been developed from the design phase toward a preliminary structural and economic feasibility analysis. Trying to ease the installation, maintenance and possible changes on time, the design solution presents the “container”, the base building with the structural skeleton, main connections and installations, and the prefabricated rooms to be inserted into the structure. In particular, the design approach is structured into three scales: Primary System, the base building, with the main structural constraints, in which the modules are plugged in; Secondary System, through the Plug&Play approach, represents the prefabricated sub-structures that host the box’s skeleton with all the engineering implants and elements useful for all the types of hospital rooms; Tertiary System, that features both the furniture and all the finishing elements, that allows short term flexibility.

Conclusions
Open Room is a meta-design research project able to implement the Open Building approach at a room scale. Thanks to the layer separation it is possible to achieve flexibility in short, medium and long term and cooperate with the current needs of the healthcare environments. This opens up to further developments and investigations, testing the feasibility at the market scale.

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From Reimagining the Streets to Reinventing the High-rise: Lessons from Park Hill on Structure for Adaptation

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Keywords: Adaptability; Open Building, adaptability, Park Hill, Streets in the air, Support and Infill

This paper took the Park Hill estate renovation scheme in Sheffield, UK as a unique and pertinent case illustrating how an Open Building could bring positive impact on the local society and urban environment. From a structured analysis of its Support and Infill system, the study finds that the initial set-out and the redevelopment of Park Hill estate has shed new light on the implementation of Open Building in three aspects: Firstly, social recognition and public expectation is vital if not necessary to the implementation; Secondly, the initial Support system of the scheme consisting the structural skeleton and deck access is very intelligent, versatile and resilient; thirdly, the redevelopment has further clarified the Support and Infill system and made either one more distinctive, which subsequently enhance the overall adaptability.

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Prefabrication: Strategic Approaches for and the Future of Long-Lasting Buildings in Chinese Traditions

JIA, Beisi

Baumschlager Eberle Hong Kong Ltd, Hong Kong

Keywords: adaptability long lasting building; sustainability; open building; tradition

The concept of sustainable development addresses the importance of high quality and longevity of buildings, which are unrestricted by energy efficiency and/or low carbon emission. The short life span of newly constructed and large-scale housing development in a rapidly growing economy, such as in China, challenges the environment and sustainable development approaches and concepts. Given the nationwide encouragement for housing prefabrication, this paper aims to rediscover the strategies of traditional construction characterized by prefabrications and the extended life span in four distinctive spatial levels, namely, public space, structure, façade, and interior fittings, classified based on Habraken's open building theory. On the basis of award-winning projects designed by Baumschlager–Eberle Architects, this study confirms that the traditional strategies of building longevity are valuable references in the modern housing industry, especially prefabricating mass housing in China.

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Openness and Hybridity: Lessons on the Fictive Potential of Urban Artifacts as based on Two Korean Regeneration Projects

BAEK, Jin

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Openness of urban artifacts has renewed its significance in the context of regeneration, exceeding the modernist approach premised on flexibility, efficiency and facileness of modification. The notion of openness as an empty background to be transformed into any setting, as in Mies van der Rohe's (1886-1969) universal space, is a theoretical fabrication, which ultimately led to a setting that is for
everything and simultaneously for nothing. Instead of this modernist's idealism, what is important is to acknowledge the fact that spaces speak, as they are equipped with a distinctive, memorable and enduring character thanks to factors ranging from narratives to physical conditions - proportion, temperature, light and dark, sound, material and so forth. I would like to argue for two points in this context. First, openness should be understood not as universal emptiness. It often comes with a character, and for this reason it operates – or it can operate - as a capacity and a limit. This dualistic condition of openness with a character defines the process of regeneration to be imaginative, fictive and productive, rather than mechanical, repetitive, and predictable. From a diametrically opposite perspective, it is the process and the implied situation that tests the resiliency of the artifact. A new light is brought to the artifact, and its faces, corners, and shades, which representational drawings, models and simulations failed to capture, are now serendipitously discovered. How an artifact may appear in reference to concrete reality and of what capacity it may operate is virtually a mystery, very much like an apple that would operate as a stone to be thrown before an enemy. Second, I argue that while openness as emptiness is infertile, openness that speaks is productive and its productivity consists in generating hybrid moments where differences are intertwined to open a third horizon beyond the conventional categorized manners of appreciation.

In arguing for the two points, my talk will involve three steps. First, it will conduct a theoretical exploration of openness by investigating several architects' and thinkers' ideas of openness such as Mies, Aldo Rossi (1931-1997) and David Leatherbarrow. This step will lead us to discover various notions of openness and highlight its significance as capacity. It will also give us an opportunity to reflect upon our habitual appropriation of openness purely as a spatial term – an influence of the modern division between the container and what is contained – in favor of a view that defines the artifact itself as openness. Then, I will highlight regeneration as having staged a new context for openness and explore the polysemic performance of urban artifacts over time. Hybridity as the form that confirms the productivity of openness will also be theorized. Lastly, I will concretize my argument by discussing two Korean regeneration cases: Literature Museum (2012) dedicated to a poet named Dongju Yun (1917-1945), and Gusandong Library (2015), a project that regrouped and transformed separate and cheaply-built multi-family buildings into a village-like library.

SS4-1-7 (O-0327)

A FIT-OUT Industry – Precondition for a Sustainable Building Stock

KENDALL, Stephen1

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Keywords: Open Building; Fit-Out Industry; Sustainability

With increasing frequency, investors worldwide are demanding real estate portfolios assured of long-term utility value, motivated by at least three forces. The first is a cultural recognition of the necessity to shift from a “scrap and build” to a “building-stock maintenance” economy. Second are increasingly differentiated and changing requirements of building occupants, leading to cycles of “churn” and regeneration. Third is the availability of an array of building subsystems and services marketed directly to users, a new disintermediation in the demand signals to which the building industry is still adjusting. Given these trends, we are now approaching a turning point in the evolution of real estate development, independent of functional classification, in which further progress toward a resilient, post-functionalist building stock hinges on the development of a distinct FIT-OUT INDUSTRY. This paper discusses the existence of such an industry sector in non-residential real property development, and speculates on reasons similar capabilities are not yet supplying the residential real estate sector. Some conditions thwarting needed maturation of the residential “remodeling” industry in the United States are outlined because they are valid to a great extent internationally. Rejection of obsolete ideology and acceptance of new methods are suggested and finally, the “Infill” or Fit-Out service offered by a company in China is presented as an example of an approach that merits further study for possible wider application.

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Implementing Open Building Methods in the Design of a Residential Building in Israel

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1G.B.A. architects, Israel

Keywords: Adaptability; Open Building; User control; Building lifespan

Current residential building design mainly addresses questions of immediate use of the average user’s needs. Investors and planners often speculate on demand of the potential user’s current requirements, and tend to neglect questions of long term usability, how to maximize the buildings’ potential and lifespan. The results are too often rigid, shortsighted buildings that lack spirit and signs of user agency. When technical and social needs change, these buildings tend to become outdated and non-functional. The A-U (Adaptable Unit) building concept, introduced in this paper, explores how Open Building concepts (planning for change) can be successfully implemented in the Israeli residential building market. The concept allows apartment expansion and transformation over time, enabling user control and extended lifespan. The concept relates to previous OB projects (in particular Next 21 in Japan), in its system separation and apartment variety. However in the A-U building the apartments are privately owned. In order to increase attractiveness for the local market, we minimized system complexity and costs and regulated the randomness of the facade panel options. Using a Combined Method façade system (developed in a previous research project) along with accessible parts of the infrastructure, we maximize the buildings’ long-term adaptability and potential for a long life span. The paper discusses how the methods developed in this feasibility project have the potential of creating long term asset value and individuality in residential buildings, by creating capacity for change, facilitating the decision making process, and extending the personalization opportunities of the users.

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An Investigation of the Refurbishment Activities in the Existing Housing Take Beijing City for Example

LI, Shanshan

1Beijing University of Civil Engineering and Architecture, China

Keywords: existing housing, refurbishment

Under the concept that housing is an act instead of a product, plenty of researches have been launched in order to accommodate the users’ changes of their own apartment both before and after occupancy. This concept and related method is clearly revealed in Professor John Habraken’s research and the subsequent practices of Open Building, and has particular merit in urban housing which is normally mass produced according to the designer’s assumption. As a design basis, the users’ change of their dwellings deserves systematic study.

This article is based on the research of the inhabitants’ refurbishment activities of their dwellings in the urban district of Beijing. In this study, 176 families were investigated to know their refurbishment motives, approaches, and involved building components. The primary methods adapted were questionnaire and face-to-face interview.

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Verification of the Infill Systems in the Skeleton Rental Housing built in 1999 -Through a Case of Flex Court Yoshida-
DOI, Shushi

1 Kyoto Tachibana University, Japan

Keywords: Skeleton Rental Housing, Infill Management System, Variable Infill, Movable Storage Furniture

‘Flex Court Yoshida’ was built as a superior 53-unit rental housing complex for moderate income people by Osaka Prefectural Housing Corporation at the Yoshida area of Higashi-Osaka in 1999. The concept of skeleton-infill system was applied to this housing complex. In the housing complex, new infill systems were developed in order to secure the flexibility not only for the initial dwellers but also for all subsequent dwellers. An infill physical system is classified into variable infill, which can be changed by dwellers, and fixed infill which cannot be changed. In addition, an infill management system (IMS) was also developed in order to support dwellers and to promote reuse of variable infill. In this research, we aimed to verify the progress of the infill systems at Flex Court Yoshida in 2016. As results of this research are as follows: 1) Instead of not purchasing variable partitions, most dwellers were able to realize various plans, which are adapted to their lifestyles, by utilizing wide living room and arranging freely movable storage furniture. 2) The infill management system disappeared several years after the start of management due to low needs for segment, to change of the infill managers and to discontinuation of infill manufacturing.

SS4-1-11 (O-0556)
Towards Adaptable and Reusable Building Elements: Harnessing the Versatility of the Construction Database through Seamless RFID and BIM data transfer
NESS, David

1 University of South Australia, Australia

Keywords: Adaptability; RFID; Reuse; Construction; BIM

This paper outlines one approach to developing the potential for replaceable parts of buildings to be adapted to changes in user needs within the context of longer life infrastructure, and outlines the approach taken in the first live test. This idea may be realized by allowing ownership of moveable components to be re-assigned via innovative business models. This would enable components, such as walls and doors, and elements such as façades, to be taken back by their providers for reuse or remanufacture, a circular process assisted by prefabrication, modularization and ‘design for adaptability’. This evolving ownership paradigm requires a robust documentation regime to archive the new form of data it would generate. The use of automated Radio Frequency Identification (RFID), including the facility to update and interrogate ‘on element’ data storage, can enable data on building elements to be accessed and updated over their life-cycle. Furthermore, this seamless bi-directional transfer of whole-of-life design documentation allows existing building elements to be traceable and reused in new designs, thereby promoting ‘cradle to cradle’ thinking, in turn promoting open and changeable built environments. This new regime creates an ongoing dynamic data repository enabling a significant change in the paradigm of life-cycle information, capturing changes in condition, performance, ownership and location.

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Corresponding Author: NESS, David (david.ness@unisa.edu.au)
**SS4-1-12 (O-0819)**

**Soul of the City; Cooperative Housing Development As Urban Vitalization Strategy For Industrial Wastelands**

KOEHLER, Marc

1Marc Koehler Architects, the Netherlands

**Keywords:** Co-operation, Vitalisation, Community, Sharing, Soul

(Oral Presentation) A building that reflects people's lives reflects the soul of the city. Contemporary urban housing developments don't allow the inhabitants to participate in the creation of their environment, therefore not contributing to the development of a progressive and dynamic soul of the city... Superlofts is a model that does so.

Superlofts is a cooperative process and building model that acts globally as an open framework for local communities to shape and revitalize their homes and urban environment. It breaks and avoids the conformity of traditional housing by providing a blueprint for cooperation that allows people to adapt the building design into a specific habitat. This creates a sense of communal urban living, while providing the individuality on a smaller scale for everyone to build their ideal homes within a generous structural framework of double height spaces that can be divided up however homeowners want. The flexibility of the Superlofts structure combine total design freedom with durability for future use and adaptations. Each project grows its own soul over time as a combined collective and community built on unique lifestyles, which develops and adjusts as the inhabitants shape their home.

The Superlofts model puts homeowners instead of developers at the centre of the decision-making process. The results are larger spaces, higher-quality materials and craftsmanship, more energy-efficient buildings and integral social sustainability. Superlofts bring individuality back into the housing market and soul into the city.

The community codevelops together from the earliest stages of a project, green energy systems, building sustainability technology and implements strategies to create their own energy independent of the grid. They decide and invest in collective spaces from roof terraces to gardens, work studios and guest spaces, and shared services and transportation in electric cars and charging points, bicycles and parking solutions. It's this cooperation and invested interest that creates a bond between the community and develops a strong relationship resulting in a culture of sharing and caring. It encourages the sharing of equipment, looking after a neighbour's loft or family, sharing knowledge and expertise from individual fields, be it cooking classes and fine dining in a chef's loft or drawing and appreciating art in an artist's, which contributes to the sharing economy and city soul.

The potential for bottom-up initiatives creates true vertical villages, making the Superlofts concept so relevant in today's diverse society. Every new Superlofts project contributes to a growing library of designs and ideas, which are shared with the community on a platform that connects all inhabitants and members providing inspiration, streamlined results and efficient processes. Superlofts is the customisable development model of the future, available today with MKA.

The concept has thrived in industrial wastelands and areas on the fringe of the city, bringing a new sense of identity and revitalisation to these developing urban environments. Realised Superlofts projects in the Houthavens and Buiksloterham industrial areas of Amsterdam, Netherlands, portray this. Their highly energy efficient, spacious and light filled lofts combine with collective roof terrace and garden spaces to encapsulate the lively communities. With constant and dynamic activity, the projects form a theatrical backdrop to the city, reflecting the inner community and individuality in equilibrium. The projects highlight Superlofts' ability to transform and generate life in once obsolete and growing areas into vitalised mini cities and vibrant communities.

Superlofts facilitate the true art of inhabitation and soul of the city. Discover more at Superlofts.co

**Corresponding Author:** Marc Koehler (marc@marckoehler.nl)
IT & ARCHITECTURE

Special Session 1-3
Smart City as a New Urban Platform
Tuesday, 5th September, 2017
14:00-16:40 / 307A (3F)

SS1-3-1

CHO, Daeyeon
Korea Agency for Infrastructure Technology Advancement, Republic of Korea

SS1-3-2

Status and Performance of Smart City in Korea
CHO, Young Tae
LH, Republic of Korea

Smart City, which conceptually emerged in the mid-1990s, is a global paradigm. Since the early 2000s, Korea has pursued Smart City as a U-City policy brand. Especially, LH, which is responsible for land and urban development, has led smart city policies and practices in Korea. In this study, I will look at the status and performance of LH’s business, which represents Korea’s Smart City situation. The purpose of this paper is to analyze the business progress in a timely manner and compare the cost and effect of the project. Smart City will also conduct a qualitative analysis through a survey of its stakeholders. As a result of this study, I intend to elucidate the characteristics of smart city in Korea and to improve the user satisfaction and policy effect in the future.

SS1-3-3

Smart City as a Platform with technology, governance, and Innovation
LEE, Jaeyong
KRIHS, Republic of Korea

Most of all countries in the world have considered Smart city as the next urban model. For developing countries, smart city can be the most effective tool model to solve urban problems which they already faced. Developing countries cannot afford to construct enough urban infrastructures to manage urban problems because of uncontrolled fast urban population growth. Therefore, they need more cost-effective urban model to control urban problems. For developed countries, smart city can be the model for the economic growth and against the climate change.

Smart city can be very efficient tool for solving urban problems and promoting next economic growth. And the center of these characteristic will be the data and information from collecting all around city. Smart city platform, in IT word, is the system to collect data and information from all around city and to provide these data and information in exact time and to exact people with the form of service or solution.

When we consider smart city platform, two different ways can be considered.
First one is, in IT way, the system. In this case, main issues will be (1) how to collect various data and information, (2) how to store and manage data and information and how to transform data and information to service, and (3) how to provide service to people in exact time and exact place. And, Cloud, IoT(Internet of Things), AI(Artificial Intelligence), Big Data and other cutting-edge technology will be also important.
Second one is broader concept. In this case, platform is broader system to activate smart city. Smart city can be worked properly only with considering technology, governance, and innovation together.
Technology can be important in the first stage of smart city; construction. In the second stage; operation, governance is important and the third stage; sustainable development, innovation is important part. We may need to consider both ways when we discuss the platform of smart city to achieve better understanding of smart city.

SS1-3-4

Decision Making Supporting System for Sustainable SmartCity as a Tool of Urban

LEE, Gunwon

Hoseo University, Republic of Korea

Since the Paris Agreement has been signed in December 2015, the world encountered a new climate era called “Post-Tokyo Accord”. Previously only developed countries had to follow green house gas(GHG) emissions reduction policy. However, from 2030 all the members of United Nations Framework Convention on Climate Change(UNFCCC) have to submit amount of GHG emissions reduction and status quo of Intended Nationally Determined Contributions(INDCs) regularly to UNFCCC and also announce it to public. GHG reduction is not just other countries’ issue.

Following the global issue, Korean government has also announced to reduce 37 % of the predicted emissions of the year 2030. As a result, since 2000 GHG emissions in Korea has increased steadily. So Korean government needs put an effort to reduce it. As urban and architecture field accounts for roughly 40 % of GHG emissions, the need to take action to reduce GHG became greater.

Korean government has been putting a lot of efforts to cope with global issues in advance. And Korea university consortium supported by Ministry of Land, Infrastructure and Transport and Korea Agency for Infrastructure Technology Advancement from December 2011 put a lot of effort in developing various decision making supporting system for experts to find out forecasted GHG emissions after urban construction when planning and designing city. Also, guidelines to reduce CO2 emissions have been developed.

This system ‘urban planning decision making supporting system for reduction GHG emissions’ is one of our research outcomes and encompasses city, transportation, energy and waste fields. This system forecasts GHG emissions of urban spatial pattern, development method, development scale and other planning techniques that urban planners choose and review various alternatives to reduce that. In order to do this research, we chose Suwon city as a test-bed, collected real data and developed algorithm and verified accuracy of its precision of system using one of them. Also, we proposed data collecting systems related to this research to Suwon local government.

We expect that these research findings can help transform our urban spatial structure to be more energy-saving one. We look forward to converting our city to smart city which can adapt to industry 4.0 era by developing these results.

SS1-3-5 (O-0905)

Smart City: Incubating New Spatial Participation

YOO, Seungho

University College London, United Kingdom

Keywords: smart city, social media, Twitter, civic participation, spatial analysis

The concept of smart city has been developed to integrate different technologies and make a harmony between them for building better urban environment. However, Kitchin (2014) argues that an essential aspect of the smart city is to develop civic participation and opened governance by the technologies rather than the technologies itself. Recently, people have more interested in multiple social issues and lead it to online and offline engagement based on ICTs devices and infrastructure. Their networks that are flexible, speedy and no restriction from time and place create more opportunities for organising online communities, and it links to offline groups to conduct collective actions on real urban space. In particular, recent urban collective actions using social media interweaves online and offline and make a new form of social phenomenon in contemporary cities as we have watched from the Arab Spring, the Occupy Wall Street and candlelight rallies. This paper
argues that social media, particularly Twitter, combined with mobile devices and Internet infrastructure, create a new form of spatial participation with the interaction between online and offline. Finally, the paper explores how the spatial participation can be analysed and visualised in real-time with the case of End Austerity Now Protest that happened in London, 2015 through the data collection and simulation of Twitter data.

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Korean Housing Architecture Urban Development

Special Session 2-2
Housing Culture in Seoul over the past, present, and future
Tuesday, 5th September, 2017
14:00-16:00 / 300 (3F)

SS2-2-1
Policies and strategies of SH corporation for sustainability in Seoul
BYEON, Chang-Heum
Seoul Housing & Communities Corporation, Republic of Korea

SS2-2-2
Policy direction for multi-family housing Design in Seoul
PARK, Kyung-uh
Seoul Metropolitan Government, Republic of Korea

SS2-2-3
Customer oriented public rental housing and community-housing
NAM, Won-Seok
The Seoul Institute, Republic of Korea

SS2-2-4
Urban regeneration and low-rise residential areas regeneration
CHO, Jun-bae
Seoul Housing & Communities Corporation, Republic of Korea

SS2-2-5
Creating an innovation space for industry economic development
KANG, Dong-wan
Seoul Housing & Communities Corporation, Republic of Korea
Development of Zero energy House for future housing trends

LEE, Kyu-In

Ajou University, Republic of Korea

Global Support Services and International cooperation programs

OH, Soo-nam

Seoul Housing & Communities Corporation, Republic of Korea

Dr. Soonam Oh currently serves as Executive Director of Seoul Urban Solutions Agency of Seoul Housing and Communities Corporation. The agency is given by Seoul Metropolitan Government a mandate to share Seoul’s urban development experience and solutions with foreign cities that may benefit from the Seoul case. He brings ample international development experience to his current role as he is a sixteen-year veteran of Asian Development Bank (ADB), where he was mainly responsible for country and regional development at strategic level for various Asian countries and regions. His engagement spanned from macroeconomics to finance, infrastructure, and industrial developments, among others. Prior to ADB, he served as an Economist at Korea’s central bank, the Bank of Korea, for twenty years. After ADB, he has taught economics at Korea University. He holds a Bachelor’s degree in Economics from Seoul National University and a PhD from the University of Pittsburgh in the USA, and recently earned an MA in Coaching Psychology from Kwangwoon University in Seoul, Korea.

Current Issues of Architecture and City

Special Session 3-3

Session 1: Southeast Asian Houses: Expanding Tradition

Session 2: Southeast Asian Houses: Embracing Urban Context

Tuesday, 5th September, 2017

14:00-17:30 / 307B (3F)

Salient Features of Southeast Asian Housing

JU, Seo Ryeung

Kyung Hee University, Republic of Korea

Southeast Asia’s unique culture was formed as the Eastern Chinese and Indian beliefs and the Western civilization merged through the trade routes overarching the continents. Although Southeast Asian countries tend to be generalized due to the common geographical, climatic, and historical contexts, they have ethnical and religious differences that characterize their distinctive housing cultures. In this presentation, each country’s unique way of utilizing the general feature of Southeast Asian architecture will be highlighted.

The general features of Southeast Asian housings can be summarized as follows:
1. Gender Division: The gender division within Southeast Asian housings have existed due to the indigenous religion and customs.

2. Boundary Space: Spaces such as serambi in Malaysia, emper in Indonesia, and phalai in Thai act as a boundary between public and private areas (i.e. outside/inside and male/female) and they also function as a transitional space for movement.

3. Climate Adaptive Design: The vernacular houses in Southeast Asia have developed unique roofs, walls, and columns in order to accommodate to the hot and humid tropical climate.

4. Community Space: Many social events such as wedding, funeral and religious meetings are held in a public space of a house or in a community building of a village.

In the following presentation, a more detailed study of the diversities within the general Southeast Asian housing features will be discussed.

SS3-3-2

Gender Equality in Malay Building Tradition

ARIFFIN, Syed Iskandar

Universiti Teknologi Malaysia, MALAYSIA

The tradition of house building in Malay culture has been largely dominated by male members of the community. Tukang is the name given to master craftsmen or chief builder, of which most of the time is a man. None of the tukang being reported came from the opposite gender. Most literature indicated that man has always been instrumental to house building in traditional Malay society. This paper intents to uncover the role of women in house building within the traditional Malay culture. The fact that rumah ibu (lit. ‘mother of the house’) being the term assigned to the most important space in a Malay house, showed a significant commitment towards femininity in Malay architecture. For the first time, participation of women in house building at various area of the construction will be explained. As a whole, house building tradition in Malay culture combines harmoniously the role and responsibility of men and women in building their dwelling place. Hence, in the Malay tradition a house is always meant for two or more, a place to bring up a family living.

SS3-3-3

The Transformation of Working Bench in House Design

Case Study: Traditional Bali Aga Architecture at Pengotan Village

HANAN, Himasari

Institute of Technology, Bandung, Indonesia

Bali Aga people live in the mountain region of Bali and claim that they had inhabited the island before the Balinese who are now living in the lowland in the southern part of Bali. They are often called as the highland people of Bali. Bali Aga people have their own belief system and social system, in which caste system is not acknowledged, and people bury dead body instead of burning it. They carry out similar Hindu rituals but have their own calendar for its ceremonies and procedures. The human settlement is organized and managed according to a social system that is genealogically determined and on purpose differentiated. A group of people is in charge of religious matters, and others are for social affairs and everyday life. People build houses differently than the southern Balinese do, in which buildings are laid out in conformity setting up a row of houses instead of enclosing an open space. One housing unit consists of one building for sleeping and cooking, and one building for preparing and storing things used in ritual ceremonies. Those two buildings are laid out in an opposite position, and the space between them is considered as the circulation area of the house, as well as, for the public. The concept of a house is unique in that people do not differentiate between indoor and outdoor space. Each house is inhabited by one family and row of houses comprises a housing compound confined by a solid boundary. The house is constructed following local customs that orders spatial arrangement and house form. The architecture of the house exhibits a systematic approach to housing design which enables variation of building materials and visual appearance, yet, carries on traditional principles of ordering. People are independent to renovate or reconstruct their house, but
no chance to change the spatial order. The positioning of a working bench in front the house defines the structure, size and spatial layout of the house. The first generation of the working bench is made of bamboo, by which its structure is integrated to the bamboo construction of the house. The availability of Portland cement as a building material has developed the second generation of the working bench that is merged with the raised floor of the verandah. Hereafter, the image of the bench is diminished and transformed into the intermediate space of the house, which is commonly used as the living room of the house. The third generation bench creates a new means of expressing the socio-economic status of the house’s owner. The improvement of materials being used for the raised floor has become one of the major concerns in renovating and modernizing the traditional house. The verandah establishes itself as an inevitable part of the house design, by which embellishment find a place in Bali Aga architecture. The working bench that is initially constructed for a functional purpose has transformed itself into an important design object.

**SS3-3-4**

**The Evolution of Houses Typology in Menteng: The Dynamic Change of Down Town Up-Scale Residential Area in Jakarta**

KARTIDJO, Woerjantari

*Institute of Technology, Bandung, Indonesia*

The topic of this paper is the story about Menteng housing conservation area, Jakarta. This research goal is to understand how social culture of householder will shape an intangible value and tangible characters of houses and its neighborhood area. This research explores the evolution of urban housing in Jakarta especially in Menteng area, the up-scale ad diplomatic residential in down town of Jakarta.

As a housing district located in the city center, Menteng experiences external pressures caused by development process of Jakarta, and also internal pressures caused by changes of householder lifestyle and demands of time. The external pressure is caused by the development of economic activity around and in the district, the growth and the increased density of the population, the traffic system arrangements which encourage land use changes. The internal pressure for Menteng is the social, cultural condition and activities of residents, which change through time from 1914 till 2017. As a result, the position of Menteng upscale residential area had been built on periphery of Jakarta and now becomes the prime down town area. The building also changes from low-density bungalow types houses into high-density urban houses and high-rise apartment. Menteng houses that had been design for Dutch and European community with their lifestyle and must accommodate the Indonesian resident with their specific lifestyle after independence.

This study will observed the change of social culture that influence the interior and exterior of houses and also the character of its residential neighborhood, as a result of 20 years observations since 1995 until 2017, literature study and in depth interviews with 3 generations of Menteng residences. This research use synchronic and diachronic analysis since Menteng area had been built in 1914. The research underlined the evolution through time line, the intangible paradigms of social culture of residences, the product features of space and their derivatives.

**SS3-3-5**

**Retrospective to Ancient Benchmark of Living: Stepping Forward to New Modern Housing Design in Thailand**

ANUKULYUDHATHON, Eggarin

*Kasetsart University, Thailand*

As many of Asian country where living among the waterway is the simple and normal way of life of the people. Waterway is the main vein of way of life of Thai people ,and the same, architecture adapt itself as well to stay close to the water un separately as well. Water way; canal ,river are
the corridor of urban and rural circulation where people can communicate to each other till it become the economic route. As many of the capital city, Bangkok is still the magnet of all investments and business hub by its location in the region and also by the strategy of moving further to be the great economic hub of the region.

Urban agglomeration is one of the most obvious influence which increase the density of land use in urban area and also transform urban fringe area in other purposed use, the trend of urban growth is in vertical manner since many decades and become more and more aggressive. New fashion on vertical living within the small cubic space is far away from the traditional way of life but become a fashionable for new modern life which represent the inspiration of new urbanity. New development project is now trying to push up in the center of Town especially in the CBD sector where land prize is extremely high. It’s a challenge of new urbanism, living in the middle of the city within the new complex of one stop urbanity where all the facilities are surrounded the accommodation of high rise condominium, commercial complex, office and new space for start up business and enterprise, complex of sport and recreation area and all facilities of modern life etc. The new concept of mixed facilities is the new challenge of new modern urban life which is far away from the tranquility and modesty of rural life.

New benchmark finally appear in form of super Tower in the city where the architect tried to create the masterpiece and the owner inspire to create his own landmark unfortunately without thinking of the impact on the security and the environment around the tower. In addition these super Tower doesn’t reflex the nostalgia of traditional architecture, but only give the physical outstanding masterpieces as to promote the business economically. Isn’t the time that Super Tower have to seriously mind the safety and wellness of the users and the people nearby?

SS3-3-6

Fragmentation of Community Bonds in Urban Housing: Evolving Philippine Socio-Cultural Norm and Building Typology

MORALES, Mark Anthony Mateo

University of the Philippines, Philippines

It is said that the ‘sense of community’ is derived from enhanced social bonds and relationships among individuals; deepened through interactions over time. These exchanges allow the establishment of social structures and support systems, which improve quality of living through access to services, crime prevention, as well as development and upkeep of physical environments where communities are based (Chavis and Wandersman 1990). By strengthening community bonds, we enhance each other’s social capital (Lin, Cook, and Burt 2001), and lead towards reinforcement of cultural identity – values binding people together and moving them into action (Cochrane 2006; Putnam 2002). This identity is forged first among families, the smallest yet most important among social structures (Goldsmith 1976). In urban centers, where the diversity of individuals, amenities, and services promote a fast-paced lifestyle, this sense of community is being replaced by individualism, which is considered a liberating prospect by some, or a demise in cherished values by others (Florida 2005, 2013). Individualism is observed especially in housing developments, where interactions between family and community are supposedly most profound. If such individualistic pattern of interaction is growing in a society (such as in the Philippines), where core values are hinged on family and community, we might ask ourselves: are we losing more than what we are gaining?

This paper focuses on socio-spatial relationships prevailing in high-rise residential buildings in Ortigas Center in Metro Manila; a mixed-use district located in the middle of the Philippines’ National Capital Region. A review of literature is collated and analyzed, with interviews complementing acquired secondary sources. Initial findings point to a pattern of weakened community bonds permeating in the study areas’ high-rise residential enclaves. What are the socio-spatial features that enhance – or weaken – community bonds among vertical housing developments in Ortigas Center? Theoretical
discussions concerning Filipino cultural relationships and socio-spatial interactions in residential spaces will promote greater understanding in the role of identity in social capital development, and may be dovetailed with housing policy, planning and design potentialities.

SS3-3-7

The Development of Malaysian Modern Urban Housing typology

OMAR, Saari

University of Malaysia, Malaysia

The economic development of Malaysia can be identified with three distinct periods; i.e. the colonial period (or the pre-independent period), the post-independent period (1957-1970s) and the New Economic Policy period (from 1970s onward). The development of modern urban housing followed the same development pattern.

During the pre-independent period, the common typologies for urban housing were the shop houses for the town centers and detached houses for the outskirts and rural areas. However, the post independent economic development that focused on import substitution industrialization saw rapid expansion of main town centers and the development of new housing settlements on the periphery. The predominant typology for this new housing settlements were in the form terrace houses, semi detached houses and detached houses.

As the cities and towns expanded due to rapid urbanization resulted from the New Economic Policy, which the state directly intervened and participated in the economic sector, the multi storey dwelling were the preferred choice for housing development due to scarcity of land within the town areas. The rapid expansions of the Malaysia Modern Housing development were mainly due to the economic condition. However, the nature of land laws, the requirements of building and planning legislation and most importantly, the building industry practices that were brought back by the Western trained professionals contributed directly to the architectural form and expression of housing typologies.

The types of houses commonly available in Malaysia are;

1. Bungalow/Detached houses
2. Semi Detached houses
3. Terrace houses
4. Cluster houses
5. Flats/Apartments

The aim of the talk is to provide further understanding on the evolution of housing typology in urban Malaysia and the factors that affect its form and shape. The talk will illustrate, using graphical illustration how the dominant type of houses were formed or taking shape around the economic and legislative requirements.

SS3-3-8

Safe Spaces: Estimating Housing Discrimination against Same-Sex Couples in Dillman, Quezon City (A Philippine Case Study)

LIBAN, V.R.

University of the Philippines, Philippines

The research aims to provide the first ever study on housing discrimination against same-sex couples in the Philippines. Given the scarcity of studies both in housing discrimination and gender studies, it seeks to utilize a multi-disciplinary approach to estate planning with a gender lens at its core. It adopts and patterns itself with the well-established matched-pair testing methodology, which has been a hallmark of previous U.S. Department of Housing and Urban Development (HUD) housing discrimination studies (HDSs). This will be used in examining the electronically advertised rental housing market in Dilliman, Quezon City, Philippines.

With the growing clamour from the LGBT Movement and the Congress to pass an Anti-Discrimination Bill, discrimination in civic spaces based on Sexual Orientation Gender Identity and Expression
(SOGIE) is observed delicately. In 2014, the Local Government of Quezon City expands the 2003 city ordinance prohibiting discrimination against homosexuals in the workplace into an ordinance that prevents discrimination based on SOGIE. Hence, it is but expected from a city advocating for equality that its residents do not discriminate even in the market such as the rental housing market. Housing on the other hand remains as one of the main problems of this country with a backlog of around 5.56 million in 2016 (UDHA, 2016). Patterned after the housing discrimination study of the United States Department of Housing and Urban Development (2013), this study seeks to provide an estimate of housing discrimination against same-sex couples in Diliman, Quezon City. Tests will be divided between those examining discrimination against gay men and those examining discrimination against lesbians, both relative to the treatment of heterosexual couples.

Current Issues of Architecture and City

Special Session 3-4
Future of facade and energy saving using vacuum glass
Wednesday, 6th September, 2017
10:00-13:00 / 307B (3F)

SS3-4-1

Construction in the Flow of Time – Preparing an Industry for the Future
LORD, Ian
EAGON Window & Doors co.,ltd. / CTO, United Kingdom

The presentation will briefly consider façade development and how as an industry we are responding and importantly, what more we need to do? In the past 100 years social systems, living arrangements and working patterns have changed faster and more radically than ever before. The next forty years we will witness a global population expansion and urbanisation. A desire for optimum comfort and greater design freedom prevails, yet cost awareness and resource efficiency places pressure on an industry which is still learning how to incorporate technological developments. Holistic building design encourages all parties to play a role aligned to their core competencies and remains widely acknowledged as the way forward. However, the often adverse contractual and commercial aspects of the construction industry result in the full benefits of an all encompassing passive and inter-active façade approach, not being achieved. In certain circumstances, re-work and time delay being the short sighted outcome of cost only syndrome. Building Information Management is an integrated tool for today that should create the added value opportunity for tomorrow. Design of windows, doors and facades for green and intelligent buildings require aligned innovation strategies. A Technology PUSH strategy which identifies technological trends, aligned with a market PULL strategy that is driven by current inadequate customer satisfaction, whilst also anticipating future customer needs. How we all respond today, shapes and prepares our industry for the future.

SS3-4-2

Facades - Systematically unique
HANS, Oliver
Schueco International KG, Germany

Today’s design tools allow for geometric variation throughout architectural projects, permitting the designer to manipulate i.e. an entire façade while controlling each element individually. The technical implementation of
parametrically developed constructions is generally complex and demanding. Architects, engineers and fabricators are confronted with challenges of geometry, structural design, complicated detailing and varying software interfaces during design and production. How can façade systems address these challenges? What is needed to facilitate future projects?"

SS3-4-3

**Energy-saving windows using vacuum glass**

AN, Jung-hyuck

*EAGON Windows & Doors, Republic of Korea*

**IT & ARCHITECTURE**

**Special Session 1-4**

**Kinetic Surface Design**

**Wednesday, 6th September, 2017**

**13:00-15:00 / 307A(3F)**

SS1-4-1

**Klima Responsive Kinetic Façade**

LEE, Byung Koo

*Heerim Architects & Planners, Republic of Korea*

The kinetic façade as one of smart building skins forms an interface between the environment and user inside; it can be called as one of smart building technologies which improve energy performances and design effects of buildings with responsive kinetic technologies such as sensors, control systems, and actuators. Klima Responsive Kinetic Façade(KRKF) gives an example of how kinetic façade can be energy-efficient and new sense of aesthetics with dynamic facade effects, by measuring and moving actual environmental conditions with building space mock-ups. KRKF is automatically controlled by the control system in response to change of indoor and outdoor environment conditions such as temperature, diffuse irradiation, total solar radiation and wind speed. The slat of the kinetic facade is opened and closed at the optimal angle to control the room temperature, natural light and the glare according to the data collected from the external environmental sensor. In order to develop the control algorithm, we simulated the correlation between the external environment and the energy consumption at 10 intervals from 0 degree to 90 degrees, and the tendency of the optimum angle was figured out. Among the external environmental factors, the sensitivity of the environmental factor affecting the angle of slat was analyzed considering main environmental factors such as dry bulb temperature, sun azimuth angle, scattered light, direct light and wind speed variables with safety were included in the control algorithm. The kinetic façade slats were intended to produce dynamic triangular patterns. The material used for slats are aluminum and fabric. The transmittance of slat is found that can ensure appropriate natural light illumination in the office space. The fabric is selected that satisfies the transmittance. Aluminum slat was produced by 3mm perforation on aluminum plate for the required transmittance, where the exterior view can be seen even when the kinetic façade is closed. In order to prevent indoor glare, a wing was installed between the two slats, so that the direct solar radiation would not enter the room. The manufactured kinetic façade sized 4.1m x 5m was installed in a mock-up room to monitor seasonal energy-saving effects. The energy reduction effect of the mock-up room constructed with
high performance insulation and kinetic surface was about 44% in the summer and 41% in the winter compared to the mock-up room constructed by the current law standards. Klima Responsive Kinetic Façade has a significance as a result of comprehensive study of façade design for diversity, energy-saving and indoor comfort in smarter architecture.

**SS1-4-2**

**PARAMETRIC DESIGN - SUN PROTECTION SYSTEM OF THE Q1, thyssenkrupp Quarter, Essen, Germany**

**STEFFENS, Jürgen**

*JSWD Architekten, Germany*

A novel, highly efficient sun protection system was developed for building Q1 at the thyssenkrupp Campus at Essen. The utilization of this system in high-rise buildings is unique worldwide. 3,150 milled stainless steel double axles, fitted with 400,000 horizontal stainless steel lamellas, protect the building from overheating and, when in the closed position, direct natural light into the interior.

The stainless steel double axles are powered by 1,280 linear motors. They are capable of the following initial positions:
- shut (parallel to the thermic glass shell)
- sun-tracking (variable, at right angle to the angle of the sun)
- open (the horizontal lamellas interlace across the double axles, at right angle to the thermic glass shell)

A software system, designed to require the least possible resources, controls the sun protection system during the daytime depending on weather conditions: it will direct the system dynamically toward the angle of the sun, or when the sky is overcast, it will remain open. With this, the building is going through a permanent transformation process. The building is characterized by the weather conditions of a single day, a week, a month, a year, the natural interplay between the sun and the clouds; all these factors contribute to the building image. This product creates a very powerful and complex architectural structure, which stands in stark contrast to traditional sun protection systems. The triangular, trapezoid and rectangular elements contribute to create this impression. The building moves away from being a static entity as the computer controls the various different geometric elements in response to the position of the sun. An outside observer cannot escape the impression of a graceful structure of metal springs - whose surface areas, depending on seasonal and time of day light conditions, create the reflection of the various light moods in ever changing new visual impressions.

The sun protection system represents a component of the overall building energy concept. This system has been instrumental in combining the technical and functional requirements of a modern office work environment with due regard to sustainability and energy efficiency, with architectural elements thereby creating an ambitious symbiosis.

**SS1-4-3**

**Dynamic Facades**

**GISELBRECHT, Ernst**

*Ernst Giselbrecht + Partner, Austria*

The dynamic façade obtains a new impact, it becomes the interface between the public and the private, with the possibility to communicate. This is the reason why we engage in dynamic façades, which not only respond to physical restraints such as temperature and sun, but also can be regulated individually and thereby communicate an ever-changing façade image.

This new dynamic façade developed from the desire to reduce energy consumption and express
sustainability, but is also an architectural response to the strong position of the individual in today’s society, something that is expressed in almost every aspect of this building.

For the Future we can assume that the buildings will communicate among themselves, similar to the programmes that were developed by the vehicle industry to improve road safety. Thereby, our urban room will receive a new dynamic component which not only demonstrates the 4th dimension, but also fills it with excitement and constitutes it permanently.

SS1-4-4 (O-0534)

Alternative Actuation Techniques for Kinetic Surface

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Keywords: Dynamic Facade, Kinetic Surface, Snapping, Sustainability, Shading

To achieve dynamic motion of kinetic surface with less energy consumption and less maintenance, we propose shading devices using alternative actuation technique based on material and geometry nonlinearities. LEAF (Low Energy Adaptive Facade) uses light responsive polymer sheet in millimeter scale to smoothly respond to the sun movement. Snapping Facade explores a sustainable building envelope design strategy that utilizes elastic instability to create dynamic motion.

The building envelope controls heat gain and loss, allows views for visual comfort, and provides natural light. Advances in the high performance glass industry have made the use of glass ubiquitous. However, in the United States, buildings account for 41% of energy use and 38% of CO2 emissions. The increasing need for high performance buildings and advancements in manufacturing industries have facilitated the design of dynamic building envelopes to replace traditional, uninspiring shading controls. There are several dynamic façade systems such as Abu-Dhabi Investment Council Headquarters by AHR Architects, dynamic roof shading at Aldar Central Market by Foster + Partners, Hoberman Associates and Adaptive Building Initiative and Kiefer Technic Showroom by Giselbrecht+Partner. However, all those systems are based on mechanical actuators which need additional energy consumption to operate and require further maintenance. Advances in material science and engineering have also contributed to the mission of smarter building envelope. For instance, electrochromic glass uses voltage to change light transmission property. Other Smart glass such as Suspended Particle Devices can provide a similar function and form-changing polymer sheet can be installed in the glazing units. Compared to the mechanical dynamic shading, these glass systems can efficiently provide substantial energy saving with low cost, but the façade design becomes independent gears added to the irrelevant building design.

The Low Energy Adaptive Facade (LEAF) integrates a photochemical responsive polymer sheet into building facades through an origami inspired folding pattern. It aims to emulate the diffuse, dappled light quality created by deciduous trees in the summertime by sensitively responding to daylighting conditions. LEAF achieves the integration between the shape changing polymer sheets and parametric design for sustainability and artistry through building envelope design. In addition, Snapping Facade suggests an alternative approach for the design of dynamic facade systems that use a “snapping-induced motion” to open and close apertures, providing shading for the building. The prototype uses curved elastic strips, which are characterized by snapping motion upon small stimulus. The design of the membrane between the strips need be further investigated to find the optimal folding mechanism. The Snapping Facade aims to harness the characteristics of elastic instability and to apply it as an opening and closing mechanism using the embedded energy within the materials.

These promising concept of alternative actuations for kinetic surface allow, without complicated maintenance, users experience the dynamic movement of the building envelope for play, fun, and energy saving.

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Current Issues of Architecture and City

Special Session 3-5
Water Sensitive Urban Design for Future
Wednesday, 6th September, 2017
13:00-15:10 / 300 (3F)

SS3-5-1
Wgeneration : Waterfronts & Regeneration for New Urban Realm

YANG, Doshik
K-water, Republic of Korea

Waterfronts have begun to be revisited by urban researchers, practitioners and developers during the last two decades because they were considered to be valuable urban assets for vitalising urban areas and significant natural assets for ecological benefits. At present, waterfront developments has become a world-wide phenomenon, trying to maximise water’s economic, socio-cultural, and environmental potential.

Since the early successful waterfront regeneration of the 1960s, the waterfront regeneration phenomenon has been observed around the world. “The waterfront regeneration was the major event in urban planning and developments. It symbolized the 1980s in the same way that motorway construction and new town building characterised the 1950s and 1960s” (Hall, 1993: 19). In the course of waterfront regeneration, waterfronts have been recognised as not only an important public domain because of their wide open natural settings and historic heritage along the water’s edge and their psychological impact on humans, but also as significant cultural places. “They are also unique in their potential to provide diversified opportunities for economic development, public enjoyment, civic identity” (Urban Land Institute, 1983) and sustainable development (Yang, 2006)

In addition, waterfronts have been recognised as not only an important 21st century quality human settlements because of their wide open natural settings, but also as significant ecological benefit to the public. Despite benchmarking on the successful waterfront development experiences in Europe and North America, water-oriented waterfront developments in South Korea is only now beginning to be incorporated into urban planning and policies. In particular, through regeneration, integrating water, waterfronts and waterways’ potentials into a city is facing a great challenge among researchers, practitioners and developers.

SS3-5-2 (O-0462)
Flowing Buildings. Complexity and Flexibility of Architectural and Urban Design Concept

TERTEL, Anna
Anna Tertel Aterier, Poland

Architecture reflect human life style. Modern architecture is in many cases very static and mathematical to match newest ideas of life. To keep balance in design should be as many female factors with soft and curvy shapes as man’s factors. Today’s architecture developed by the technology to take more and more attention to the factors that influence shape. The use of these factors in the design of a building can significantly increase their attractiveness and maintain their efficiency. There is an advantage in shaping the building as an extension of the terrain. These shapes enable the use of the roof as an additional area of green water collection, cooling effect of building and improving the attractiveness of the environment. Waterfront in the environment can adjust the shape and function of the liquid form, flexibility and reflectance similar to the water behavior. The shape of buildings and facades also affects the aesthetic perception and the nature of urban space. Rounded and curved buildings are more customer-friendly and make more open reception...
environment. The organic and continuous shape of buildings help with changes in their function and adjustment to the needs of users and the development and changes in the structure of the habitat. The openness and flexibility of the form is continued by the openness and flexibility of function in which only the key elements are planned in advance and executed. This type of development fits easily into the proposed human-architectural-urban fabric. According to the theory of complexity, it is possible to design harmonious urban structure, where each element match harmoniously neighboring elements and create a coherent and uniform spatial tissue. Following this idea in every scale and layer is emerging continuity that organically organize life and structure of the city.

SS3-5-3

Re-designing the Urban Waterfront of Hue City in Vietnam

KIM, Saehoon
Seoul National University, Republic of Korea

Urban design often served as a vehicle toward materializing a promising development scheme associated with economic growth of cities. With the emergence of inter-city competition and globalization, the role has shifted in many parts of the world: urban design is opportunistically crafted as a means of popularizing urban spaces in association with pilot projects along the waterfront. The change can be observed in a number of waterfront cities in the developing world. Especially in a city that mobilizing large capital is unfavorable, urban design does not necessarily aim at producing a prestigious and symbolic landmark guided by long-term planning; rather, collaborative place-making efforts are made across a number of waterfront sites to attract both domestic and international attention using minimal budget and ad hoc resources. During the design procedure, a series of disconnected schemes are put together along the rivers, forming a patchwork landscape. The method potentially benefits local neighborhoods that would otherwise see little change over time. But doing so is also challenging for at least two reasons. First, urban design will have to cope with greater variations in the scale and scope of development, which may lead to more expensive and lengthy design procedure. Second, substantial uncertainty in the social impacts of a redesigned waterfront area makes it difficult to reconcile different values of affected communities. In this article, urban design experience along the Huong River in Hue, Vietnam will be discussed to illustrate this perspective.

SS3-5-4

Planning Framework For Sustainable Waterfront Development: South Boston Waterfront

JU, Jeong-Jun
Boston Redevelopment Authority, United States of America

The physical and economic growth of Boston has been built on its harbors and waterfronts. As the 47-mile long waterfronts are the crucial resources today for social, cultural, and economic life of every Bostonian, ensuring economically viable, socially diverse, and environmentally sustainable waterfront has become far more important and challenging. In addressing the challenge, the Massachusetts Public Waterfront Act, known as Chapter 91, provides a fundamental planning framework that guides local municipalities to effectively ensure economically and environmentally sustainable waterfront development. While the chapter 91 was instituted primarily to protect the rights of public to and promote water dependent uses at the waterfront, the South Boston Municipal Harbor planning shows us how the Chapter 91 and its regulatory framework have been critically instrumental to transform the South Boston waterfront from primary homes for marine and naval industries to the captivating 24/7 economically diverse, socially active waterfront neighborhood. The environmentally diverse, economically active and geographically accessible South Boston waterfront is becoming a place for the 21st century waterfront community that is innovative, diverse, and sustainable.

As the influx of both fiscal and human capital investments continues to position Boston’s waterfront as the next urban frontier for the future growth, the challenge of climate change has become far more critical than ever in order to maintain the social and economic vitality of the city. In recognition of the fact that the unavoidable effects of climate change will only grow, the city of Boston has been working...
with the Massachusetts Office of Coastal Zone Management and community partners on an initiative, Climate Ready Boston, that will provide a systematic and comprehensive framework to enhance near- and long-term climate change preparedness and resiliency in Boston.

This discussion is to primarily examine the regulatory roles of Chapter 91 as an instrumental planning framework to enable the city to ensure an economically viable and environmentally resilient waterfront neighborhood, and also provide an overview of the collective efforts among the city of Boston, State, and community partners in designing effective responses to climate change.

SS3-5-5

Reclaiming Waterfront as “Public-Front” in Hong Kong

OH, Daniel

Korea University, Republic of Korea

Hong Kong has one of the most celebrated and iconic waterfronts in the world. And yet, visitors rarely see beyond the glitter and spectacles of Hong Kong waterfront to understand the significance of the waterfront to the citizens of Hong Kong. All major reclamation works of the Victoria Harbour coincide with major public debates and political turmoil in Hong Kong since the first reclamation works in the 1850’s. Using West Kowloon Cultural District (WKCD), this presentation attempts to illustrate Hong Kong’s struggle to redefine a modern public waterfront in the 21st century. WKCD is a testament that delivering a resilient waterfront design must be preceded by an adequate public discourse to reinstate social and cultural significance of the project in the eyes of the public; and a good waterfront design begins and ends with the public.

This presentation begins on an idea that the concept of resilient waterfront should extend beyond planning and designing of physical waterfront and rethink waterfront interventions as ecosystem of public dialogues and services. By borrowing key concepts from ecology and ecological economics, this presentation broadens the idea of resilience of the future waterfront design. Three concepts are proposed: diversity, exchange, and service; these concepts help to re-define characteristics of resilient waterfront. These concepts provide a stage for demonstrating social cohesion; this increased capacity of waterfront as a platform for social progress is called “Public-front,” which, consequently, produces a better waterfront design complemented by public ownership and stewardship. Hong Kong waterfront is a reminder that a successful and resilient waterfront is one that continuously re-shapes constructive social and political discourse in the eyes and the hearts of the public.

As much as physical design does matter in creating a successful waterfront, designing a thoughtful public engagement is the key in the case of Hong Kong waterfront. Moreover, Hong Kong waterfront has elevated its stance from an urban environment typology to a platform on which social and political discourse take place; hence, the term “Public-front” embraces the idea that waterfront design begins with encouraging public participation, stimulating diversity of ideas and inclusive decision-making process. Ultimately, the aim of good waterfront design must be pioneering and expanding the realm of social and political dialogue to advance the society as a whole.

SS3-5-6

Water Sensitive Urban Design in Korea: Shihwa Waterplan

KIM, Kyung-bae

Inha University, Republic of Korea

In Korean, waterfronts were spaces disconnected from the surrounding cities. Moreover, the concrete levees served as the biggest factors of the severance of the relationship between the waterfront and the surrounding cities. In addition, waterfronts were places that people watched from a distance; and in most cases, spaces adjacent to riparian land were for disaster prevention, such as flood control, and not for urban purposes. This paper aims to propose a set of water sensitive urban design concepts, principles, strategies and transferable lessons for future development by analyzing a cutting edge urban design projects towards sustainable waterfront design, Shihwa Waterfront City Project in South Korea. Based on the result of the analysis, this paper suggests a new concept for future sustainable waterfront design; SOFT Bank City and WaterPlan.
Sustainable Urban Regeneration and London’s Waterfront
KIM, Jeong Hoo (Robin)
Ucl University, United Kingdom

Why is London one of the world’s most envied cities? As I will argue, the River Thames is the basis upon which London’s contemporary desirability has been cultivated, through many periods of concerted growth and change.

The Thames runs through the centre of London. As a crucial spatial and visual component of the city, the river has made a significant contribution to the city’s growth. It continues to inspire urban planners and architects with a vision of London, which may only be realised through innovative design.

This is why many of the buildings and spaces built alongside the Thames provide the symbolic images of the city that we know today. Particularly of note, in shaping the visual character of London, is the waterfront. Originally, post-war decline of the manufacturing industry had led to neglect of the waterfront. However, during the last 20 years, London’s planners have focused on maximizing its potential, in recognition of the Thames’s latent capacity for generating growth in the city. Within the framework of sustainable urban regeneration, the waterfront of the Thames has become the heart of the city, stimulating various cultural and economic activities.

This presentation explores London’s waterfront regeneration. Focus is especially given to major projects such as the Millennium projects alongside the Thames, and their impact on the sustainable urban regeneration of the city.

So vital it is to understand sustainable regeneration for many Korean cities that this presentation also examines the methodology and conceptual theory behind the successful waterfront design in London. Therefore, my intention in this presentation is to develop the ideas of the waterfront design, in the hope of providing cities in Korea with a platform for achieving their own sustainable waterfront regeneration.

Open Building Session 2: Open Building Heritage
Wednesday, 6th September, 2017
14:00-18:00 / 308A (3F)

Sode-Dan Revitalizing Project – Case Study of Regenerating the Aging Mass Housing Blocks
by Transferring Common Spaces into ‘Shared’

TAJIMA, Noriyuki

Keywords: urban regeneration, mass housing, shared, aging society

This paper explains the Sodegaura-Danchi (Sode-Dan) Regeneration Project and the process of its development. Preparation for the project begun at the end of 2014 and the project officially started in early 2015. Sode-Dan is an area with large, mass-housing blocks located in Narashino-City, Chiba Prefecture, near JR Tsudanuma Station, 30 minutes by east-bound train from Tokyo Station. Narashino-city local
The government originally requested us, the Chiba Institute of Technology (CIT), to help prevent the population of the area from declining and ameliorate problems associated with the aging population. Mass-housing blocks were built during the era of strong economic growth (1960’s~70’s) in Japan in order to accommodate the rapidly growing population in the expanding suburbs. Sode-Dan was built in 1967 and there were 79 buildings with more than 3,000 units, containing 11,000 residents at their peak in the 60’s, but now less than 6,000 residents live there, and vacancy rates are rising every year. More than 36 percent of residents in this area are over 65 years old, making it one of the most aging areas in Narashino-city. Every year, about 2,000 CIT students look for rooms in neighbouring areas and this project seeks to accommodate those students and contribute to improving the urban situation. First, we considered changing the housing blocks into ‘shared’ houses. Then we considered the use of common spaces such as vacant shops and squares situated in the centre of the area. We decided to change these common spaces into areas for ‘shared’ student activities, then to make those spaces and activities open to the existing residents. This strategy is a kind of social experiment and we held several events and workshops in the last two years, taking advantage of the spaces for community exchanges among existing residents and students and newcomers to the area. Through describing the development process of this project, here in this paper, we aim to verify the effectiveness of the ‘shared’ concept and examine the future possibilities for resolving urban problems in such mass-housing blocks.

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SS4-2-2 (O-0611)

Evaluating the generality and adaptability of floor plans using the SAGA method: a didactic example based on the historical shophouse and gentry house types

HERTHOGS, Pieter

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Keywords: adaptability assessment; generality; plan analysis; Space Syntax; Design for Change

Buildings with a high level of generality are designed in such a way that they can support changing needs and requirements without having to make physical alterations. Adaptability is the result of (purposeful) decisions regarding design and detailing that make it easier to alter a building when change is required. The SAGA method - Spatial Assessment of Generality and Adaptability - quantifies how well a building’s spatial connectivity network and surface area distribution can support change passively (i.e. generality) and actively (i.e. adaptability). In essence, SAGA indicators measure different kinds of floor plan permeability, using both existing and potential connections between spaces. The present paper serves as an illustration and didactic example, demonstrating the importance of generality and adaptability, and SAGA’s ability to quantify these concepts, by analysing two historic building types cherished for their ability to support change: the South-East Asian shophouse and the Belgian ‘gentry house’. The indicator scores support that both types are highly general and adaptable, and show that the shophouse is mainly adaptable because of its large surface areas, while the gentry house is highly general in terms of spatial configuration, and both general and adaptable in terms of surface areas. By means of evaluating, such indicators can inform architects designing for change.

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SS4-2-3 (O-0618)

Study on Sustainability of the Living Environment with a Focus on Capacity of Japanese Rental Housing Complex

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Division of Business Administration, The NUCB Graduate School, Japan

Keywords: Capacity, Adaptability, Rental housing complex, Open building theory, Levels

Public housing complex sites, built in the period of mass supply as a solution to the shortage of housing after World War II in Japan, have become inadequate as rental accommodation for residents. In such circumstances, large-scale architectural renovation of housing complex sites, housing stock from the industrialization age, and their renewal to meet the current needs of residents have been attracting attention. For example, at the levels of dwelling unit (infill level) and housing block (support level), creating a single dwelling unit from two or new installation of elevators have been performed. At the housing complex site level (common level), creation of various sceneries and renewal of outdoor facilities have been conducted through the extension and reduction of buildings. In addition, if the scale is further extended to the level of society (tissue level) including the housing complex site area, the possibility of integrated area management of the site and surrounding areas, for example, can be considered as one of the capacity items. Appropriate evaluation of the current and future values of a housing complex site by quantitatively and qualitatively clarifying and understanding the capacity of the housing complex site on various scales are important for using housing stock in the age of depopulation. Against this background, this study extends the concept of “capacity” from the infill and support levels to the common and tissue levels and compares and analyzes examples of renovated and non-renovated housing complex sites in order to acquire knowledge of sustainability of the living environment of such sites (Fig 1). As a result, the following points can contribute to enhancement of sustainability. 1. At the infill and support levels, use of dwelling units for non-residence purposes is effective if there is no space on the first floor for commercial or shared use. 2. At the common level, relaxing regulations for active use of an open space is effective. In this case, the management and administration system needs to be well organized. 3. At the tissue level, not only the high land price but also the openness of the housing complex site and the convenience of transport facilities are effective.

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SS4-2-4 (O-0562)

Open Urban Design: An Explorative Review on Urban Design Studio

MAHARIKA, Ilya Fadjar

Universitas Islam Indonesia, Indonesia

Keywords: open building; open design; open city; studio; open urban design

The gap between creativity and rationality in the field of architecture and urban design in the architecture school’s studio is attempted to be explored through studio experimentation. A class experimentation entitled Open Urban Design Studio was conducted involving fifteen students of Department of Architecture Faculty of Civil Engineering and Planning, Universitas Islam Indonesia. Two questions to be explored were: is there any new thinking that arises from studio experimentation in interpreting open urban design? What is the role of learning in the context of open urban design? The experimentation showed that open urban design may be a new concept to open a broader understanding of urban design. It is able to reach the concept of openness, starting from the physics (open building), the design process (open design), to democratic aspirations (open city). Students’ works show there are three genres in open urban design to propose, namely: (1) Urban invitation that gives opportunity for the society to build narration; (2) Urban frame that diminishes the barrier between architecture and infrastructure to create new variations of life-settings; and (3) Urban parts that forms a codified urban element allowing the citizens to plug in the city system.

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SS4-2-5 (O-0715)

**A Residential Open Building Roadmap and Potentials in China**

**WANG, Lin**\(^{1*}\); **LI, Guopeng\(^{1}\)**

\(^{1}\) Dalian University of Technology, China

**Keywords:** Open Building; roadmap; case studies; design principles

After more than half a century’s practices, Open Building is well organised and implemented in the field of residential area to increase adaptability and sustainability of dwellings. This paper reviews the development of residential Open Building in China and attempts to reveal potentials for the open design and practice of Chinese dwelling production. The first part of this paper briefly describes the Open Building developments, starting from the early beginning of Open Building Theory and condensing into people, methods and projects. In the second step, a roadmap for residential Open Building in China, including recent developments and projects, is presented to describe and identify the start impulse and the results of Open Building in China. The third part of the paper concentrates on the examination of key Open Building cases in China, which are analysed and narrowed down to the three values: general Open Building design principles, support and infill design technologies. By reviewing the Chinese case studies and the design values of residential Open Building, key aspects showing the potentials and challenges for the future of residential Open Building in China can be summarised for future reference.

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SS4-2-6 (O-0851)

**Making Inclusive Cities in the Platform Society**

**POOL, Marthijn N.**\(^{*}\)

\(^{1}\) Architect, Researcher, Space&Matter B.V., Amsterdam, The Netherlands

**Keywords:** Democratization, Self-Organization, Community Building, Open System, Inclusivity

Developments in social economic tendencies show an increased influence of consumers in the development process of residential real estate. To what extent does this result in an improved quality of architecture and urbanism? From the perspective of sociological and anthropological understandings the insights into the motivations of the individual will be reflected on architectural design and its process. This design process needs to adapt to these new conditions and provide an open and accessible framework to interact with. The author has developed several methods for democratizing the architectural design process resulting in a more user specific and open architecture. Our cities need Open Systems in order to grow and become resilient and not rigid. People should be able to change the environment they live in, the longer they live in them. The city’s Eco-System is about equilibrium and balance, for a city to evolve, the imbalance is important. The city needs to remain open and unpredictable in order to be resilient. This paper describes which Open Process and tools result in creating Open Buildings. The authors mission to aim for an Open City is being described by implemented case studies. The author’s experience and theoretical framework is being developed synchronously.

Since architecture and urban design touches on all levels of society, space&matter involves a wide spectrum of disciplines in their design and development process. Before configuring space, understanding sociocultural processes adds relevance to our designs; our objective is connecting people and their environments. In order to reach a high level of connectivity in the built environment it’s relevant to Open up the Design Process. Experts, stakeholders and also end-users can collaborate in the process of creation from an early stage. This makes our architecture more specific and more sustainable. Citymaking in the age of the Platform Society requires different modes of personalization and customization. The focus is beyond the individual yet rather on the collective and the common values underlying these so-called collectives. Opposing the general tendency of stating that we live in an individualized society, Space&Matter states that individuals are more connected.
than ever before. The quality of the linkage is deteriorating, but the quantitative level of connectivity is still increasing. By investigating the use-cases of multiple tools and methodologies, Space & Matter actively researches the appropriate incorporation of the Internet as a mechanism in making a more Inclusive City.

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IT & ARCHITECTURE

Special Session 1-5
Smart Move and Work
Wednesday, 6th September, 2017
15:30-18:00 / 300 (3F)

SS1-5-1
Spatiality of Future Mobility that Hyundai Propose
KIM, Minsoo
Hyundai Motor Company, Republic of Korea

SS1-5-2
New Future and Mobility Life
LEE, Soon-Jong
KFDRI, Republic of Korea

SS1-5-3
Non-Zero-Sum City: City of the 4th Industrial Revolution
HAH, Tesoc
SCALE, Republic of Korea

SS1-5-4
Redesigning mobility: new experiences and emerging disruptive technologies
CASALEGNO, Federico
MIT Mobile Experience Lab, United States of America
SS1-5-5

Smart Work in Economic Terms

YUM, Yu Kyoung
Gyeonggi Research Institute, Republic of Korea

SS1-5-6

Smart Work & Smart Space Revolution

CHUN, Eui Young
Kyonggi University, Republic of Korea

Korean Housing Architecture Urban Development

Special Session 2-3

Korean Traditional Architecture: Legacy and Challenges

Wednesday, 6th September, 2017
15:30-17:00 / 307A (3F)

SS2-3-1

The Architecture and Confucianism in Korea

CHO, Jaemo
Kyungpook National University, Republic of Korea

Joseon Dynasty in Korean history was the Confucian nation and its Capital city and official facilities were constructed on the base of Confucianism that was founded by Kongzi at 5th century B.C. in ancient China. Confucianism was one of the most influential ideology among East Asian society as political system, social ideology and people’s everyday life. From the architectural viewpoint, the main issues are building typology and human behavior in it. Not only the main facilities composing Capital city of Seoul such as Gyungbok-gung palace and other several palaces, Jongmyo shrine for the ancestral gods, Sajik the alter for the State deities, but also the local facilities of Munmyo the shrine for Kongzi and Seowon the private school of Neo-Confucian scholars were built for realizing an Confucian ideal society. This presentation is the introduction of these some important architectural facilities of Gyungbok-gung palace, Jongmyo and Seowon in the context of Korean Confucianism. Gyungbok-gung is the primary palace of Joseon Dynasty. It was built at the late 14th century and was changes as Confucian facility during King Sejong’s period. The Royal assembly ceremony, banquet and funeral rite are the most important rituals in it. Jongmyo is the historic site that shows the whole history of politics and human thought of Joseon Dynasty. Sewon is the private educational facility located in local area for Neo-Confucian ideology and it shows the intelligent network for making standard type of their own school different from Chinese or Japanese one. Confucian architecture is the necessary requisite to understand the history, politics, thought and culture of Joseon Dynasty. The social leaders of Dynasty built these facilities for Confucian ideal society and they remain as the important cultural heritages of Korean history.
SS2-3-2

The Location of Korean Timber Structure in East-Asian Architecture

LEE, Kangmin

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The form and structure of Korean architecture was developed by following ancient East-Asian traditions of architecture. A significant use of heavy purlins which were laid across girders established the typical format of the East-Asian roof structure. This resulted in a way of designating the size of the roof structure by counting the number of purlins. Complete timber structure that needed no bearing walls promoted the standardizing usage of the pillar. This created a unit by which buildings were measured with the number of openings between the pillars.

These two units of building appeared at the same time in building laws from the Tang Dynasty of China. They became some of the most important norms in East-Asian architecture which showed harmonious integration of space and structure. Stylistic features of East-Asian architecture, such as the elegant roof curves and the bracket system with its complicated method of assembly, were completed and shared in the process. Since then, the regional characteristics of each country were reinforced by the variety of needs for space and structure. But standardization and industrialization caused the separation between space and structure. In other words, the space planning and the structural design did not need to be done simultaneously.

However, Korean architecture has maintained its original norms more than other architectures in East-Asia. Significantly, because Korea enshrined the authenticity of its ancient roof system, there was difficulty in building wide and complex interior spaces. In the case of residential buildings, a solution to the integration between the units of space and structure was never abandoned though it was quite difficult, especially in dealing with the corner problem in roof structures where two buildings met. Therefore, the three dimensional unit systems could be maintained. In this way the unique aesthetics of Korean timber structure was developed.

SS2-3-3

The Evolution of Hanok and the Myth of Hanok

KIM, Hyon-Sob

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‘Hanok’ (한옥, 韓屋), the traditional Korean house, has been modernized for the last century and the recent Hanok boom further facilitated its modernization and evolution. Accordingly, the so-called ‘New Hanok’ or ‘Contemporary Hanok’ came to include diverse modern qualities — in terms of structure, space, form, materiality, etc. — that are far from the traditional standard. In particular, some architects’ designs are so liberal that it is questionable at times whether or not they could belong to the category of Hanok. If so, how could we understand Contemporary Hanok and, moreover, what does the Hanok boom connote? To answer the questions, this research sets two targets. One is to outline the overall situation of Contemporary Hanok, focusing on architects’ designs since early 2000 when Hanok preservation policies were activated, and to classify it according to the degree of its deviation from the traditional norm. Here, architects’ progressive transforming the traditional building type is considered valuable since it signifies a possibility of ever-changing modernity. Paradoxically, however, the other target is to illuminate the mythic face of the current Hanok phenomenon. The nostalgic longing for the ‘ideal’ past, or the trial to retrieve the irretrievable, is just a myth in this metropolitan society. Here, the Heideggerian myth of the Heimat intersects with the Barthesian myth of ideology, which distorts the meaning of a reality to sustain the existing dominant power. Despite acknowledging the value of architects’ experiments on individual Hanok designs, this research is rather suspicious of the Hanok boom at a collective level. That is because the Hanok boom — sponsored by (local) governmental policies and integrated with the logic of the market system — is in fact fundamentally rooted in both ideologies of nationalism and capitalism, often without a considerate understanding of tradition. Arguably, the paradox implied in the evolution of Hanok and the myth of Hanok reflects the reality of the present society like South Korea and invites a critical re-reading of architecture.
SS2-3-4

Modernizing Korean Traditional Housing: Issues for Theory and Implementation

JUNG, Youngsoo

Myongji University, Republic of Korea

As an attempt to disseminate traditional Korean culture in many different areas, a comprehensive research has been initiated by Korean government in order to modernize Korean traditional housing (Hanok). This ‘Hanok’ project encompasses a wide spectrum of housing research including public policies, planning methods, standard design documents, new building materials and methods, construction standards, maintenance manuals, and advanced IT applications in an integrated manner. Ten test-bed projects have been actually built to validate the viability of modernized concepts and techniques for Hanok. This presentation will introduce the issues and lessons learned from the comprehensive research effort for modernizing Korean traditional housing.
Special Session (Poster)

1.1. Open Architecture on the time axis

P-0577 (PSS B01-1)

Resiliency of Architectural/Urban Tissues

WOHN, Douglas*

AIA, United States of America

This is to narratively express the Resiliency of Architectural/Urban Tissues via a poignant story of a young architect. Since she had grown up in Seoul until she came to USA for another graduate study in 1978, she needed to walk the bridge connecting a wide technological cultural gap while learning the notions of good built environments and the methodologies of good placemaking by others towards her thesis. To name a few, Latent Capacity by S. (Threshold Studies); Timeless Way of Built Environment by C. Alexander (Pattern Language); Territorial/Transformational Power of Participants by J. Habraken (The Structure of The Ordinary); and Legible Imaginability by K. Lynch (Image of the City/What Time is This Place?). Based on these, in her thesis she exploringly observed the physical and cognitive territorailities of various urban neighborhood tissues in Seoul and USA. After having been qualified to be a professional architect, however, she stared to work in the public sector, Zoning & Planning Division, Inspectional Services Department, City of Boston trying to streamline the building permitting processes interacting with homeowners, property owners, contractors, builders, public/private agencies and neighbors/abutters. Due to the housing shortage in mid 1980’s, processing the building permit applications in Housing Fast-Track, she observed some vernacular Architectural/Urban Tissues extensively grow as well as the new construction boom. While living in a comfortable rental housing for her family, they went on a time-consuming ‘house hunting’ in her pursuit of the first homeownership, widely searching anywhere and visiting too many openhouses in metropolitan area of Boston. Quite exhausted and finally admitting that she had to live within Boston as an employment requirement, she ended this long journey by purchasing a condominium unit in a newly transformed old school building (Jefferson Schoolhouse) converted into 60 dwelling units. When she came to know that her duplex unit had one of four ventilation shafts over the school auditorium as abandoned above the roof, after an enduring thought she finally proceeded to reclaim it, which caused quite an inconvenience if not the rocky trouble for her entire family because of messy construction mostly by herself. However, she remained confident and committed for her idea that it should transform into a nice RoofLoft with a panoramic view all around from above the roof. Meanwhile, her career in the City’s Building Department continued for more than a 1/4 century, with her vision as a private practicing architect held in abeyance inside her mind. However, she always knew she’d eventually practice architecture full time. Now, she has been just more than two years in her retirement engaging in architecture full time, having done a couple of projects for small residential additions. She is committed in increasing housing stock in resilient existing architectural/urban tissues in the City, striving to establish her practice in her late years. Now, she is living in a suburban town feeling quite proud in that her neighbor is also an architect living in a small house, but a National Historic Landmark. To be honest though, she always has a guilty feeling that, as a matter of fact, she had not thought of him and his house much until she actually came across to see the NHL plaque on his house and he was the principal of a big firm. All these makes her profoundly question herself what she really is as a person as well as a professional and what are the real notions of good neighborhood and good built environment. (To Be Continued/Rewritten.. Note: she is actually me, intentionally.)

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P-0771 (PSS B01-2)  
Research on the Adaptability Design of Residential Buildings Based on the Upside-down System  
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Keywords: Open building, Residential building, Upside-down system, Adaptability  

Many buildings within age limit have been demolished and reconstructed in this process, which results in waste of resources, environmental pollution and a series of social problems. Open building, as a method of architectural design theory, focuses on the use of the whole life cycle of the building, to provide a new guiding thinking for the future construction of buildings. Theory of open building is not only limited to the transformation of architectural space, but also the change of relationship among time, function and people. This paper takes the upside-down system as the core, and probes respectively two adaptive designs of residential building types in low-rise high density and high-rise high density through several program analyses, to provide references and thoughts for designs of the existing residential building transformation in China.  

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P-0769 (PSS B02-1)  
To Improve Space Utilization Efficiency: Periodic Renting Mode of Residential Open Buildings  
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Keywords: space efficiency; periodic space; open buildings; residence; renting  

In modern daily life, people always keep switching between various kinds of space patterns. This makes people's demands for space usually divided into two categories: necessary space and periodic space. Take living space as an example, necessary space refers to people's long-term and stable requirements of space, such as a young couple's bedroom, living room, etc.; Periodic space refers to the part-time used, part-time unused space, such as the second bedroom for old people to visit the householder periodically. Leaving periodic space unused brings in waste of social resources and housing pressure. If living space can be periodically rent, its efficiency will be greatly improved. Open buildings have flexibility of renting and transformation as a kind of changeable structure system. Based on open buildings as the background, this paper discusses the possible three kinds of periodic renting modes. One is the model of separated rooms shared by distribution – for large family's apartment (open building), set the entrance porch as a space with double doors, and the porch leads to a flexible separated bedroom. When this separated bedroom lie idle periodically, it can be shared for renting out, and the householder’s main rooms can be separated by the inner door. The second one is the model of sharing common rooms with a management platform - for the small family’s apartment (open building), reserve a public room between two families, set doors on both sides, make use of the common space by community management network platform to minimize the idle space. The third one is large space combined sharing model.  

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P-0685 (PSS B02-2)
Renovation Research of Chinese Existing Dwelling Based on Open Building Theory

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Keywords: OpenBuilding, Existing Dwelling, Renovation, Beijing

This paper is based on an international design workshop with the theme of “Open Building” held at Beijing University of Civil Engineering and Architecture. In this workshop, the invited famous experts and scholars both domestic and international in the field of Open Building worked together as a research team with teachers and graduates of Beijing University of Civil Engineering and Architecture, deeply understanding the Open Building design concept and trying to explore its practicability in the application of renovating existing buildings. It is well known that “Open Building” originated from the Dutch Professor N. John Habraken’s the support theory in 1960s. Since the “Reform and Open” era of China, with the rapid development of Chinese urbanization and large-scale construction of residential buildings, theory of Open Building has been brought into China, the local Chinese architects have also made many attempts and practices, and also have had far reaching impact. In recent years, the problems to be solved in Chinese urban development is how to effectively make a large number of old houses and apartments adapt to human’s more and update needs instead of the simply demolishment and reconstruction for these old buildings. Therefore, the renovation of existing residential buildings become imperative. For the paper, it is hoped that with the help of Open Building theory, the two representative existing dwelling types of Beijing, the low-rise/high density model and the high-rise/high density model, are specially selected to do renovation research on purpose of exploring the varied transformation methods for different dwelling types.

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P-0316 (PSS B03-1)
Regulatory Mechanisms For the Regeneration and Development of Residential Urban Tissues in Moscow

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Keywords: Moscow, urban tissue, transformation, living environmental, mechanisms of regulation

Urban design is a domain of professional knowledge and intervention that lies between urban planning (Basically two dimensional urban and land-use structuring and policy making) and architecture (built form as infrastructure). Urban design is the level of intervention in which certain “shared rules of the game” can establish the shape and extent of public space. With those “rules” or “themes,” individual developers and their architects can contribute to what ideally – and over time - becomes a coherent tissue made up of thematically related individual building, independent of function. This paper focuses on the question of the capability of Russian legislation to produce new - and to regenerate existing - urban fabric through application of urban governance principles based on levels of intervention (where higher level rules or themes help make lower level variety coherent) and distributed control (because no single party controls all decisions). The paper discusses research about legal and political regulation in Moscow’s urban tissue transformation in the context of industrial and post-industrial social development, as well as the evolution of the morphology of Moscow’s living environments over time.

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P-0279 (PSS B03-2)

**Application of Open Building System in Existing Gallery Low-rise Building of Apartment**

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**Keywords:** Open Building, Gallery Low-rise Building of Apartment, Reactivate, Infill System

The paper focuses on exploring the method of applying open building system in existing gallery low-rise building of apartment. In China, there are many existing students’ apartment which were built several decades ago. Most of them are gallery low-rise building of apartments which has a corridor in the middle and rooms on both sides. However, the students’ requirements of apartments are changing along with time, which calling for more variety and flexibility in space design. In a study project of open building system, my partner and I proposed a plan to renovate the old low-rise admonitory in Beijing Foreign Language University with open building method. With the application of infill walls, the space of room can be changed according to the varied demands of students. The design of the façade preserved part of the original wall and added several balconies which would cause least harm to the original structure. It will cost less with more sustainability. The open building system, standing out for its variety, is worthy of deeper studying and wider applying in the existing building.

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1.2. Open Architecture as cultural production

P-0339 (PSS B04-1)

**Research on Exploratory Design of Opening Residential Building Defragmentation**

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**Keywords:** Opening buildings, industrial design, defragmentation, residential buildings

With the Reform and Opening up, China’s housing construction has made considerable progress into the rapid development stage. The continuous development of China’s society, economy and culture has accelerated the process of urbanization, and the new types of residential users, living modes and dwelling units are also emerging. China’s urban dwellings have been characterized by rapid economic development and dramatic social changes, and are experiencing a strategic shift from increased construction to higher quality of living. It is the key point of residential design and practice to pay attention to the new housing mode suitable for China's national conditions, to meet the diversified living demand and finally to realize the sustainable development of residential construction. In the process of exploring residential design, the concept of international open housing has attracted wide attention due to its various characteristics, and the discussion and practice of open housing has become a topic of much attention in residential design field in recent years. On the basis of deep research on the basic theory of open house and industrial design, this paper explores the related concepts of the application of the concept of open house to trace its development and evolution, and puts forward the concept of residential space of "defragmentation". “Defrag” from computer program operation in a term refers to the system software or professional disk defragmentation software on the computer disk in the long-term use of the process of generating fragments and messy files to re-order, can improve the overall performance of the computer and Running speed. From the computer defragmentation process to be inspired, the author of this process on the scale and continuity of the principles and models applied to the theory of urban and architectural systems, the definition of open space in the concept of residential space system, and through the debris space recombined with the deformation of the model of residential renewal to explore the initial attempt to build a set to meet the
needs of the use of the population and the use of their own characteristics and patterns of residential
defragmentation update mode. Finally, use the open architecture approach to adapt to the living mode of sustainable living residential design to improve and explore the feasibility of domestic open housing development and development potential in order to propose a more adaptive and humane sustainable mode of living.

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P-0278 (PSS B04-2)

Open Design Solution For Future and Better Traditional Market Building. a Case Study of
Demangan Market, Yogyakarta

SARAH, Amira Rasyida1*; CHILMI, Abdulloh1; MAKATITA, Viyata M W1; PRATIWI, Yulia1

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Keywords: Demangan Market, Open design, Flexible Stall

Demangan Market is a traditional market which is located in the city of Jakarta where in this market still apply the transaction of buying and selling with traditional system. In addition, the items sold are identical items with daily necessities that are not durable. In the process of sale also has special treatment such as the existence of storage and the separation of one item with other goods, plus the difference between dry goods and wet goods. Based on wet goods are the cause of many problems in Demangan market, namely in producing rotting garbage, sewage water, and also smell pollution. Thus, in this study recommends to redesign Demangan Market with Open Design approach to solve the problem with 3 steps to achieve the results: 1. Analyze the problematic Demangan market layout to be able to know what needs redesigned 2. Analyze the types of goods that sold and located 3. Analyze the circulation and disposal system in order to determine optimal integration. After that obtained the result of a stall design with an open design approach that makes flexible in order to meet the deficiencies in the Demangan Market.

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1.3. Open Architecture as technical production

P-0280 (PSS B05-1)

Open Vertical Housing in Airport City Kulon Progo, D.I Yogyakarta, Indonesia

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Keywords: Adaptability; Social Interaction; Vertical Housing; Open Design

Yogyakarta Special Region is one of the provinces in Indonesia which has diverse cultures, tourism, and education. The government is currently undertaking the construction of an international airport located in Kecamatan Glagah, Kulonprogo, D.I Yogyakarta, Indonesia as an integrated transportation facility. In the master plan of Kulon Progo Airport, there is a development of the urban area of the airport and the people affected by evictions will be relocated to vertical housing. Adaptation to the environment between humans and the natural environment can give birth to a new social structure called social interaction. The research method used is analytical descriptive because it describes the state of social interaction in horizontal settlement which is then analyzed and adapted in vertical housing building while the design method used is Open Design, because the idea of designing the environment is a product that keeps running with the design process that never ends up such environmental changes as part of the design, such as function, spatial dimension, circulation,
infrastructure installation, and thermal comfort. The purpose of this research is to produce vertical housing design principles that can accommodate horizontal social interaction and know the characteristics of social interaction on the horizontal housing in the area of City City Kulonprogo. To create commercial activities in this building, it will be integrated with local site characters such as wetland paddies and forests that will be processed into high value products. Thus, people do not lose their livelihood because most of the people are farmers.

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2.1. Virtual Reality in Architecture

P-0616 (PSS B05-2)

Development of BIM-based Building Safety Design Using VR Technology

HYE-JIN, Park¹; JI-HYO, Seo¹; SEUNG-YEON, Choo¹;

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Keywords: VR, BIM, Building Safety Design, Safety Simulation, Fuzor

Recently, safety design to protect users from the risk of life has become an issue. Particularly, advanced countries such UK, USA, and Japan have emphasized the importance of ‘DFS(design for safety)’ and established various institutional measures to protect the safety of architects, constructor, and user throughout the entire life cycle in construction industry. This study proposes an evaluation process of building safety design to extract the general safety design factors, living safety factors, and reflect it in the early design stage. As a result of analysis, it was found that the use of BIM and VR for Safety Design was beneficial for cooperation between the designer and the user with a few design changes. It is also beneficial for immediate design change considering safety factors and optimized design plans could be extracted through objective and efficient review. Through this study, living safety factors, building safety factors could be systemized and BIM-based building safety design process using VR is proposed by conducting an experiment. It is also significant that efficiency verification can improve existing building safety design.

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3.3. Urban Regeneration Issue

P-0655 (PSS B06-1)

Research on Harbin Urban Public Art Planning under New-type Urbanization

GUO, Rong¹; SONG, Xiaoya¹

Keywords: new-type urbanization;; urban public art planning;; Harbin

The urbanization rate of China was 54.77% in 2014, and surpassed the world average level. The urbanization is faced new requires, new challenges, and new jobs. With the development of urbanization, the need of arts is part of the growing quest for spiritual life. The cultural influence on city development and construction is very crucial, the culture bring spiritual promotion to the economic development and society construction imperceptibly, it can be said that the cultural construction is the soul and inner power of the city. This paper takes Harbin as the research object. Based on field investigation, this paper analyses the characteristics and problems of the development
of urban public art in the context of new urbanization. We construct the frame system of urban public art planning, and put forward the planning and design strategy of urban public art in Harbin. The planning and design of city public art is divided. Based on the current city public art theory and practice, this paper puts forward some theories and implementation strategies for the development and planning of Harbin city public art, hoping to provide theoretical and practical basis for city public art planning.

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Review

Review process

The Scientific Committee of the UIA 2017 Seoul invited participants to submit papers and design works under the theme of ‘Soul of City’ and the topics below.

Subject 1. Culture / Subject 2. Future / Subject 3. Nature

In return, 821 abstracts (575 papers, 171 Design works, and 75 Special sessions) were submitted via website at www.uia2017seoul.org by January 5, 2017.

Review of the submitted abstracts was conducted by 96 acknowledged experts in the relevant fields to assure the quality of abstracts to be published, and comply with the given theme and topics to be addressed at the UIA 2017 Seoul. The first review was conducted from January 6 to 31 for the submitted abstracts, as and the second review was conducted from June 1 to July 4 for the full papers.

Each received abstract was reviewed twice in terms of:

- Suitability of Topic;
- Creativity and Innovation;
- Logicality; and
- Sound Conclusion

To be eligible for inclusion, these abstracts were required to receive a minimum score of 4 out of 10 marked by the reviewers during the review process. After the first review, 510 abstracts were accepted for the Paper presentation (255 oral and 99 poster) and Design Works presentation (65 oral and 91 poster). 109 abstracts were conditionally accepted under the conditions to be modified or presented as posters, while 127 abstracts were rejected. At the same time, among 75 submitted abstracts for Special sessions, 37 abstracts were accepted for special sessions (31 for oral and 6 for poster), 28 abstracts were conditionally accepted, and 10 abstracts were rejected.

Authors whose abstracts were accepted after the first stage review were provided with reviewers’ comments and requested to submit their modified abstracts and full papers in reflection of the provided comments. These resubmitted full papers were reviewed again.

Authors whose papers were accepted and fully registered after this second review were provided with additional anonymous reviewers’ comments and requested to submit their revised full papers. These final papers were then added to congress programs and are to be published in the official proceedings and other publications.

Of the 821 abstracts originally received, only 438 papers were accepted for inclusion in the proceedings, with a rejection rate of 53.35%. For abstracts with clash of opinions over grades and comments given by the assigned reviewers, the General Reporter and the Scientific Committee made the final decision either to include or exclude in the abstract book and the proceedings.
# Review

## Reviewers

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## Wednesday, September 6

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